

UNCLASSIFIED

AD-732 950

# VENEZUELAN EQUINE ENCEPHALOMYELITIS

Volume 1 of 11 Volumes

## A DDC BIBLIOGRAPHY

February 1961 - January 1971

DDC-TAS-71-51-I

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AD-732 950

**VENEZUELAN**  
**EQUINE ENCEPHALOMYELITIS**

Volume I of II Volumes

**A DDC BIBLIOGRAPHY**

February 1961 - January 1971

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November 1971

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## FOREWORD

This bibliography is Volume I of a series of two volumes and is compiled of unclassified citations to reports on *Venezuelan Equine Encephalomyelitis*. The entries, arranged in AD number sequence, were selected from references processed into the AD data bank from January 1953 to August 1971.

Corporate Author-Monitoring Agency, Subject, and Personal Author Indexes are provided.

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OFFICIAL

  
ROBERT B. STEGMAIER, JR.  
Administrator  
Defense Documentation Center

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PARTIAL LIST OF <i>SCHEDULED BIBS</i> .....	(Back Cover)

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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-285 222

ARMY ENVIRONMENTAL HYGIENE AGENCY EDGEROOD ARSENAL MD

SEROLOGICAL AND VIROLOGICAL STUDIES OF ARTHROPODBORNE  
ENCEPHALITIS IN THE CHESAPEAKE BAY REGION (U)

AUG 62 IV FAVORITE, FRANK G.; FOWLER, HARLAND W.  
JR.; WHITEHEAD, DONALD R.

UNCLASSIFIED REPORT

DESCRIPTORS: \*BIOLOGY, \*BLOOD SERUM, \*DISEASES,  
\*ENCEPHALITIS VIRUS, \*EQUINE ENCEPHALOMYELITIS VIRUS,  
\*VIRUSES, ANTIGENS + ANTIBODIES, ARTHROPODS, BIRDS,  
BLOOD, COLLECTING METHODS, CULICIDAE, EPIDEMIOLOGY,  
INSECTS, MAMMALS, REPTILES, TICKS (U)

SUBJECTS' PERFORMANCE ON TESTS OF IMMEDIATE AND  
DELAYED RETENTION WAS MEASURED FOLLOWING INSTRUCTION  
BY TWO VERSIONS OF AN AUTOINSTRUCTIONAL PROGRAM: ONE  
VERSION EMPLOYED VANISHING (THE SUCCESSIVE REDUCTION  
OF STIMULUS SUPPORT) AND THE OTHER DID NOT.  
CLASSES OF 4TH-, 5TH-, AND 6THGRADE STUDENTS SERVED  
AS SS. NO SIGNIFICANT DIFFERENCE BETWEEN THE  
PERFORMANCE OF SS WHO HAD USED THE VANISHING AND THE  
NONVANISHING VERSIONS OF THE PROGRAM WAS FOUND ON THE  
IMMEDIATE TEST. ON THE TEST TAKEN TWO WEEKS AFTER  
INITIAL TRAINING, HOWEVER, THE SS WHO HAD USED THE  
VANISHING VERSION OF THE PROGRAM WERE FOUND TO HAVE  
RETAINED SIGNIFICANTLY MORE THAN SS WHO HAD USED THE  
NONVANISHING VERSION. THE RESULTS ARE INTERPRETED  
IN TERMS OF THE EFFECTS OF CONTEXT VARIABLES UPON  
RETENTION. (AUTHOR) (U)

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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-291 081

ARMY BIOLOGICAL LABS FREDERICK MD

BIBLIOGRAPHY ON EQUINE ENCEPHALOMYELITIS

(U)

IV

UNCLASSIFIED REPORT

DESCRIPTORS: \*BIBLIOGRAPHIES, \*DISEASES, \*EQUINE  
ENCEPHALOMYELITIS VIRUS, ANIMALS, ARTHROPODS, DIAGNOSIS,  
DISEASE VECTORS, EPIDEMIOLOGY, IMMUNITY, PATHOLOGY (U)

A COMPREHENSIVE BIBLIOGRAPHY ON EQUINE ENCEPHALOMYELITIS.



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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-405 977

GENERAL ELECTRIC CO MILWAUKEE WIS

STUDIES ON ARBOVIRUS INFECTIONS IN EQUINES.

(U)

DESCRIPTIVE NOTE: ANNUAL PROGRESS REPT. 1 JULY 62-30  
JUNE 62,

JUN 62 6P BYRNE, ROBERT J.

CONTRACT: DA MD49 193 42649

UNCLASSIFIED REPORT

DESCRIPTORS: VIRUS, EQUINES, IMMUNITY, BIRDS,  
TISSUE CULTURE, MICE, RABBITS, CHICKENS, ANI  
MALS, ANTIGENS AND ANTIBODIES, INFECTIONS.  
IDENTIFIERS: ARBOVIRUS.

(U)

(U)

A SERIES OF EXPERIMENTS WERE CONDUCTED IN WHICH BURROS WERE SUBJECTED TO MULTIPLE EXPOSURES TO GROUP A ARBOVIRUSES. PRODUCTION OF BROADLY RE ACTIVE CF ANTIBODIES WAS FOUND TO DEPEND ON THE SEQUENCE OF DIFFERENT VIRUSES INJECTED. THE HIGHEST BROAD SPECTRUM OF REACTIONS APPEARED IN EEE IMMUNE BURROS AFTER CHALLENGE WITH VIRULENT VEE VIRUS. PRIMARY INOCULATION WITH EEE, WEE, AND VEE GAVE GOOD SPECIFIC CF AND HAI ANTIBODY RESPONSE. IN WEE IMMUNE BURROS, CHALLENGED WITH SINDG'S VIRUS, ANTIBODY RESPONSE WAS INSIGNIFICANT. THE IMMUNE RESPONSE OF DOMESTIC CHICKENS OF VARIOUS AGES TO INOCULATION WITH EEE VIRUS IS IN PROGRESS. BLOOD VIRUS LEVELS IN YOUNGER BIRDS WERE OF A HIGHER ORDER AND PERSIST LONGER THAN IN OLDER BIRDS INOCULATED WITH THE SAME QUANTITY OF VIRUS. GUAROA VIRUS WAS CULTIVATED ON 6 DIFFERENT TISSUE CULTURE LINES. THE VIRUS IS BEING CHARACTERIZED AND THE IMMUNOLOGIC RESPONSE IS BEING MEASURED IN MICE, RABBITS, AND CHICKENS. UNSUCCESSFUL ATTEMPTS WERE MADE TO PRODUCE A HEMAGGLUTININ TO CACHE VALLEY-LIKE VIRUS RE CENTLY ISOLATED. OF 186 NON-VACCINATED PONIES, NEUTRALIZING ANTIBODIES TO EEE WERE DETECTED IN 40 WITH HA ANTIBODIES TO EEE DETECTABLE IN 19. A SEROLOGIC SURVEY INDICATES THAT A CACHE VALLEY-LIKE VIRUS IS RATHER WIDELY DISSEMINATED IN DOMESTIC ANIMALS IN THE TIDEWATER AREAS OF MARYLAND AND VIRGINIA. (AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-445 166

WALTER REED ARMY INST OF RESEARCH WASHINGTON D C

COMPLEMENT LEVELS IN EXPERIMENTAL ALLERGIC  
ENCEPHALOMYELITIS,

(U)

H. ; 44 2P TARRANT, CARL J. IFIFE, EARL

UNCLASSIFIED REPORT

REPRINT FROM NATURE, 20214924, P. 819 ONLY, 23 MAY 64.  
(COPIES NOT SUPPLIED BY DDC)

SUPPLEMENTARY NOTE:

DESCRIPTORS: (•COMPLEMENT, PHYSIOLOGY); (•ANTIGEN-  
ANTIBODY REACTIONS), PARALYSIS, ALLERGY, IMMUNOLOGY,  
BRAIN, CELLS (BIOLOGY), NEUTRALIZATION, DISEASES,  
MEDICAL RESEARCH

(U)

IDENTIFIERS: ENCEPHALOMYELITIS

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-452 927

ARMY MEDICAL UNIT FREDERICK MD

ISOLATION OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS BY BONE MARROW CULTURE, (U)

JUN 64 SP SMITH, THOMAS J. MCKINNEY,  
ROBERT W. SAWYER, WILLIAM D. I

UNCLASSIFIED REPORT

REPRINT FROM PROCEEDINGS OF THE SOCIETY  
FOR EXPERIMENTAL BIOLOGY AND MEDICINE, 117, PP. 271-  
275, 1964. (COPIES NOT SUPPLIED BY DDC)

SUPPLEMENTARY NOTE:

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, DIAGNOSIS), CULTURE MEDIA, BONE MARROW, ANTIGENS  
+ ANTIBODIES, MONKEYS, FEASIBILITY STUDIES, TISSUE  
CULTURE CELLS, SAMPLING, LYMPHATIC SYSTEM, BLOOD (U)

INFECTION IN HUMANS AND MONKEYS WITH THE TRINIDAD  
STRAIN OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
(VEE) VIRUS IS TYPICALLY A FEBRILE DISEASE OF 2 TO  
7 DAYS DURATION. VIRUS USUALLY APPEARS IN THE  
BLOOD DURING THE FIRST 24 HOURS OF INFECTION, RAPIDLY  
ACHIEVES HIGHER TITER, AND SOON DISAPPEARS, RARELY  
BEING DEMONSTRABLE AFTER THE FOURTH OR FIFTH DAY.  
SHORTLY AFTER THE END OF THE VIREMIC PHASE,  
HEMAGGLUTINATION-INHIBITING (HI) AND NEUTRALIZING  
ANTIBODIES APPEAR IN THE PERIPHERAL BLOOD. THE  
RELATIVELY BRIEF PERIOD DURING WHICH VIRUS CIRCULATES  
LIMITS THE ABILITY TO ISOLATE AND IDENTIFY THE AGENT,  
A DIFFICULTY COMMON TO MANY VIRAL INFECTIONS. THE  
PRESENT STUDY WAS UNDERTAKEN IN AN EFFORT TO OVERCOME  
THIS PROBLEM. VIRUS CONTENT OF BONE MARROW WAS  
MEASURED DURING THE COURSE OF VEE INFECTION TO  
DETERMINE IF VIRUS PERSISTED IN THIS TISSUE BEYOND  
THE VIREMIC PERIOD AT A TIME WHEN ANTIBODY WAS  
PRESENT, AND TO INVESTIGATE THE USEFULNESS OF IN  
VITRO CULTURE OF BONE MARROW AS A SOURCE OF VIRUS AND  
AS A SUSCEPTIBLE TISSUE FOR VIRUS PROPAGATION.  
(AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-453 928

ARMY MEDICAL UNIT FREDERICK MD

SIMULTANEOUS AEROSOL IMMUNIZATION OF MONKEYS WITH  
LIVE TULAREMIA AND LIVE VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VACCINES.

(U)

64 4P SAWYER, WILLIAM D. (KUEHNE,  
RALPH W. GOCHENOUR, WILLIAM S. , JR.);

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: REPRINT FROM MILITARY MEDICINE,  
120:11, PP. 1040-1042, NOV 64. (COPIES SUPPLIED BY  
DDC)

DESCRIPTORS: (BACTERIAL AEROSOLS, IMMUNITY),  
(IMMUNITY, BACTERIAL AEROSOLS), (VACCINES,  
EFFECTIVENESS), VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, PASTEURELLA TULARENSIS, DOSAGE, RESPIRATION,  
SAMPLING, EXPOSURE, MONKEYS, FEASIBILITY STUDIES,  
ANTIGENS + ANTIBODIES  
IDENTIFIERS: SEROLOGY

(U)

(U)

THE PRESENT STUDY IN MONKEYS DEMONSTRATES THAT  
EFFECTIVE PROTECTION AGAINST VEE AND TULAREMIA CAN  
BE ACHIEVED WITHOUT ADVERSE REACTION BY EXPOSURE TO  
READILY ACHIEVABLE QUANTITIES OF THE RESPECTIVE  
LIVING VACCINES IN THE FORM OF A MIXED AEROSOL.  
(AUTHOR)

(U)

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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-612 545

ARMED FORCES INST OF PATHOLOGY WASHINGTON D C

ELECTRON MICROSCOPIC STUDIES OF THE VASCULAR  
PERMEABILITY AND THE MECHANISM OF DEMYELINATION IN  
EXPERIMENTAL ALLERGIC ENCEPHALOMYELITIS, (U)

65 14P LAMPERT, P. CARPENTER, S. I

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: PUB. IN JOURNAL OF NEUROPATHOLOGY  
AND EXPERIMENTAL NEUROLOGY (U. S.) V24 N1 P11-24 JAN  
1965 (COPIES NOT AVAILABLE TO DDC OR CLEARINGHOUSE  
CUSTOMERS) PRESENTED IN PART AT THE ANNUAL MEETING OF THE  
AMERICAN ASSOCIATION OF NEUROPATHOLOGISTS, 13 JUN  
64, HELD AT ATLANTIC CITY, N. J.

DESCRIPTORS: (BRAIN, DISEASES); (SPINAL CORD,  
DISEASES); (NERVE FIBERS, PATHOLOGY); ELECTRON  
MICROSCOPY; ALLERGY; TRACER STUDIES; PERMEABILITY; CELLS  
(BIOLOGY); THORIUM COMPOUNDS; DIOXIDES; RATS (U)  
IDENTIFIERS: MYELIN, ENCEPHALOMYELITIS,  
THOROTRAST (U)

IN EARLY LESIONS OF EXPERIMENTAL ALLERGIC  
ENCEPHALOMYELITIS IN RATS THOROTRAST PASSES THROUGH  
VESSEL WALLS CONCOMITANT WITH INVADING MONONUCLEAR  
CELLS. THE PARTICLES ARE FOUND BETWEEN THE  
ENDOTHELIAL CELLS, WITHIN THE VACUOLATED BASEMENT  
MEMBRANE, AND IN THE EXTRACELLULAR SPACE BETWEEN  
GLIAL PROCESSES. IN ADVANCED LESIONS, MARKEDLY  
WIDENED EXTRACELLULAR SPACES OFTEN CONTAIN THREADS OF  
FIBRIN ALONG WITH THOROTRAST. DEMYELINATION  
OCCURS IN THE PRESENCE OF MONONUCLEAR CELLS WHICH  
INVADE THE MYELIN SHEATH, PEELING OFF INDIVIDUAL  
MYELIN LAMELLAE OR THE ENTIRE SHEATH. A SEPARATE  
ALTERATION OF MYELIN CONSISTS OF A REGULAR WIDENING  
OF THE INTERLAMELLAR SPACE BEGINNING WITH THE OUTER  
LAYERS. THE POSSIBILITY THAT THIS CHANGE PRECEDES  
THE CELLULAR INVASION OF THE MYELIN SHEATH IS  
DISCUSSED. (AUTHOR) (U)

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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-620 445

ARMY MEDICAL UNIT FREDERICK MD

EXPERIMENTAL INFECTION OF DOGS WITH TWO STRAINS OF  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS, (U)

65 6P TABER, L. E. ; HOGGE, A. L. ,  
JR. ; MCKINNEY, R. W. ;

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: PUB. IN AMERICAN JOURNAL OF  
TROPICAL MEDICINE AND HYGIENE V14 N4 P647-51 (COPIES  
NOT AVAILABLE TO DDC OR CLEARINGHOUSE CUSTOMERS).

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, DOGS), INFECTIONS, IMMUNITY, ANTIGENS +  
ANTIBODIES (U)

DOGS INFECTED WITH UNMODIFIED VEE DEVELOPED  
FEVER, VIREMIA, AND LEUKOPENIA. SEVEN OF THE DOGS  
INFECTED FAILED TO MANIFEST FRANK CLINICAL SIGNS OF  
ILLNESS. THE REMAINING THREE DOGS BECAME SOMEWHAT  
AGGRESSIVE TOWARD THE OTHER DOGS AND LESS RECEPTIVE  
TO HANDLING; NO OTHER FRANK SIGNS OF ILLNESS WERE  
OBSERVED. THE INFECTION WAS FATAL FOR TWO OF THE  
THREE. MICROSCOPIC EXAMINATION OF THE BRAINS OF  
THESE TWO ANIMALS FAILED TO REVEAL EVIDENCE OF  
ENCEPHALITIS EVEN THOUGH VIRUS WAS RECOVERED. THE  
ATTENUATED STRAIN CAUSED AN INAPPARENT INFECTION  
DETECTABLE ONLY BY SEROLOGIC METHODS. THE  
INFECTION RESULTED IN IMMUNITY TO SUBSEQUENT  
CHALLENGE WITH UNMODIFIED VIRUS. (AUTHOR) (U)

UNCLASSIFIED

ODC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-632 531

6/12

ARMY MEDICAL UNIT FREDERICK MD PHYSICAL SCIENCES DIV

ALTERATIONS OF PROTEIN SYNTHESIS IN ARBOVIRUS-  
INFECTED L CELLS.

(U)

NOV 65

7P

LUST, GEORGE I

UNCLASSIFIED REPORT

AVAILABILITY: PUBLISHED IN JOURNAL OF BACTERIOLOGY

V91 N4 P1612-7 APR 1966.

SUPPLEMENTARY NOTE:

DESCRIPTORS: (+ARBOVIRUSES, RIBONUCLEIC ACIDS),  
(+RIBONUCLEIC ACIDS, SYNTHESIS), (+PROTEINS,  
BIOSYNTHESIS), VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, ENZYMES, CYTOPLASM, NUCLEOSIDES,  
PHOSPHATES, MAGNESIUM, TISSUE CULTURE  
IDENTIFIERS: ACTINOMYCINS

(U)

(U)

CELLULAR PROTEIN SYNTHESIS AND RIBONUCLEIC ACID  
(RNA) SYNTHESIS IN MOUSE L CELLS WERE MARKEDLY  
DEPRESSED 1 HR AFTER INFECTION WITH VENEZUELAN  
EQUINE ENCEPHALOMYELITIS VIRUS. HOST RNA AND  
PROTEIN SYNTHESIS WERE INHIBITED MORE RAPIDLY BY THE  
VIRUS INFECTION THAN BY ACTINOMYCIN D. IN CELLS  
INFECTED 4 HR, A CYTOPLASMIC RNA POLYMERASE WAS  
DEMONSTRATED WHICH WAS ABSENT IN UNINFECTED CELLS.  
AT THIS TIME, DEOXYRIBONUCLEIC ACID-DIRECTED RNA  
SYNTHESIS CATALYZED BY THE NUCLEAR RNA POLYMERASE  
WAS INHIBITED IN NITRO IN ENZYME PREPARATIONS FROM  
NUCLEI OF VIRUS INFECTED CELLS. FOR OPTIMAL  
ACTIVITY, THE CYTOPLASMIC RNA POLYMERASE REQUIRED  
THE FOUR NUCLEOSIDE TRIPHOSPHATES, MG(++), AND  
RNA. THE ENZYME WAS INSENSITIVE TO ACTINOMYCIN D  
AND DEOXYRIBONUCLEASE, INDICATING THAT IT CATALYZED  
RNA-DIRECTED RNA SYNTHESIS. ATTEMPTS TO PURIFY  
THE INDUCED POLYMERASE FURTHER WERE UNSUCCESSFUL.  
FRESH PREPARATIONS HAD TO BE USED BECAUSE THE  
ENZYMATIC ACTIVITY WAS UNSTABLE. (AUTHOR)

(U)

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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AF-634 227 6/13 6/3  
ARMY MEDICAL UNIT FREDERICK MD

MOSQUITO TRANSMISSION OF VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS FROM EXPERIMENTALLY INFECTED  
DOGS, (U)

66 4P DAVIS, M. H.; HODGE, A.  
L., JR.; CORRIAN, E. C.; FERRELL, J. F. 1

UNCLASSIFIED REPORT

AVAILABILITY: PUBLISHED IN AMERICAN JOURNAL OF  
TROPICAL MEDICINE AND HYGIENE V18 N2 P227-30 1966.  
SUPPLEMENTARY NOTE: PREPARED IN COOPERATION WITH ARMY  
BIOLOGICAL LABS., FORT DETRICK, MD.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, DISEASE VECTORS); DOGS, AEDES, ANTIGENS  
+ ANTIBODIES, GUINEA PIGS, SERODIAGNOSIS,  
HISTOLOGY (U)  
IDENTIFIERS: HEMAGGLUTINATION-INHIBITION TESTS (U)

DOGS EXPERIMENTALLY INFECTED WITH THE TRINIDAD  
STRAIN OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
(VEE) VIRUS SERVED AS DONOR HOSTS FOR THE INFECTION  
OF AEDES TRISERIATUS MOSQUITOES, 10 PERCENT OF  
WHICH THEN TRANSMITTED THE DISEASE TO GUINEA PIGS BY  
BITE 21 DAYS LATER. A. AEGYPTI WHICH FED  
SIMULTANEOUSLY DID NOT BECOME INFECTED. THE  
INFECTION IN DOGS CAUSED A FRANK FEBRILE RESPONSE AND  
HEMAGGLUTINATION-INHIBITION ANTIBODY FORMATION.  
SIGNIFICANT VIRUS CONCENTRATIONS WERE DEMONSTRATED  
IN THE BLOOD, BRAIN, AND TESTICLE. ALTHOUGH DEATH  
OCCURRED IN 6 OF THE 10 CHALLENGED ANIMALS, OVERT  
SIGNS OF ILLNESS WERE MINIMAL. THE TWO  
UNINOCULATED DOGS WHICH WERE IN CONTACT WITH THE  
CHALLENGED DOGS BECAME INFECTED, BUT NEITHER DIED.  
MICROSCOPIC STUDY OF THE BRAINS DISCLOSED VARIOUS  
ALTERATIONS, WHICH, ALTHOUGH NOT DIAGNOSTIC, ARE  
CONSIDERED COMPATIBLE WITH VEE INFECTION.  
(AUTHOR) (U)



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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-626 890 6/12 6/5  
ARMY BIOLOGICAL LABS FREDERICK MD

DIFFERENCES AMONG VIRUS POPULATIONS RECOVERED FROM  
MICE VACCINATED WITH AN ATTENUATED STRAIN OF  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS. (U)

FEB 61 SP HEARN, HENRY J. , JR;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN THE JOURNAL OF  
IMMUNOLOGY V87 N5 P572-7 NOV 1961.  
SUPPLEMENTARY NOTE:

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, VACCINES), IMMUNITY, SPLEEN, LIVER,  
BRAIN, MICE, RECOVERY (U)

THE DIFFERENCES AMONG VIRUS POPULATIONS THAT WERE  
RECOVERED AFTER THE VACCINATION OF MICE WITH AN  
ATTENUATED STRAIN OF VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS WERE INVESTIGATED. LARGE  
QUANTITIES OF VIRUS WERE RECOVERED FROM SPLEEN AND  
LIVER TISSUES; SMALLER AMOUNTS WERE ISOLATED FROM THE  
BRAIN. DURING THE FIRST 24 HR, VIRUS POPULATIONS  
RECOVERED FROM ALL THREE TISSUES CONTAINED A MAJORITY  
OF NONLETHAL, IMMUNIZING PARTICLES WHICH GAVE HIGHER  
TITERS IN L CELLS THAN IN MICE. SUCH VIRUS  
PREPARATIONS RESEMBLED THE ATTENUATED VACCINE VIRUS  
STRAIN WITH RESPECT TO THE DEGREE OF VIRULENCE FOR  
MICE AND IN THE SMALL SIZE OF THE PLAQUES PRODUCED ON  
CHICK FIBROBLASTS. AT 72 HR, VIRUS PARTICLES  
LETHAL FOR MICE BY THE INTRAPERITONEAL (I.P.)  
ROUTE APPEARED IN SPLEEN TISSUE AND A SMALL  
PERCENTAGE OF PLAQUES, LARGER IN SIZE THAN THOSE  
PRODUCED BY THE ATTENUATED STRAIN WERE FOUND. SUCH  
VIRUS POPULATIONS, THEREFORE, SHOWED PROPERTIES  
SIMILAR TO THOSE SHOWN BY THE VIRULENT PARENT VIRUS  
FROM WHICH THE ATTENUATED STRAIN WAS DERIVED. IN  
CONTRAST, LIVER AND BRAIN TISSUE TAKEN FROM  
VACCINATED MICE YIELDED ONLY VIRUS WHICH WAS  
NONLETHAL WHEN TESTED I.P. AND WHICH PRODUCED ONLY  
SMALL PLAQUES. DESPITE THE PRESENCE OF VIRULENT  
VIRUS IN SPLEEN DEMONSTRABLE AFTER SUBINOCULATION, NO  
SIGNS OF CLINICAL ILLNESS WERE OBSERVED IN ANY OF THE  
VACCINATED MICE. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-637 242 6/13  
ARMY BIOLOGICAL LABS FREDERICK MD

ESTIMATION OF TITER OF VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS PREPARATIONS FROM A SINGLE-  
DILUTION ASSAY. (U)

JAN 63 SP RILEY, JEAN M. PATRICK,  
WILLIAM C. , III CAMPBELL, WILLIAM E. , JR.

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN JOURNAL OF BACTERIOLOGY  
V85 N6 P1296-60 JUN 1962.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, BIOLOGICAL ASSAY), MORTALITY RATES, DOSAGE,  
TIME, VIABILITY, BRAIN, MICE (U)

WHEN SUSPENSIONS OF VENEZUELAN EQUINE  
ENCEPHALOMYELITIS (VEE) VIRUS WERE INJECTED  
INTRACEREBRALLY INTO GROUPS OF MICE, A NEARLY LINEAR  
RELATIONSHIP WAS OBSERVED BETWEEN THE CONCENTRATION  
OF THE VIRUS INJECTED AND THE MEAN RECIPROCAL TIME-  
TO-DEATH OF THE MICE. A TOTAL OF 91 VEE  
PREPARATIONS WERE ASSAYED IN DUPLICATE, AND, BY  
PLOTING THE RELATIONSHIP BETWEEN THE RECIPROCAL  
TIME-TO-DEATH FOR MICE GIVEN THE .000001 DILUTION OF  
VIRUS AND THE MICLD50 (HOUSE INTRACEREBRAL  
CHALLENGE, LD50 RESPONSE) VALUES FOR THE VIRUS  
PREPARATIONS, A REFERENCE CURVE WAS ESTABLISHED.  
USING THIS REFERENCE CURVE, IT WAS POSSIBLE TO  
ESTIMATE DIRECTLY THE LD50 VALUES OF VIRUS  
SUSPENSIONS OF UNKNOWN CONCENTRATION FROM THE MEAN  
RECIPROCAL TIME-TO-DEATH OF A GROUP OF MICE INJECTED  
WITH A SINGLE DILUTION. IN THIS WORK, THE NUMBER  
OF MICE USED WAS REDUCED BY 62.5%, THE TITRATIONS  
WERE COMPLETE IN 3 TO 5 DAYS COMPARED WITH THE USUAL  
10 TO 14 DAYS, THREE TO FOUR TIMES AS MANY ASSAYS  
COULD BE DONE IN A DAY, AND NO ASSAYS HAD TO BE  
REPEATED SINCE END POINTS WERE NOT MISSED. THE  
PRECISION OF THE SINGLE-DILUTION ASSAY COMPARED  
FAVORABLY WITH THAT OF THE LD50 TITRATION.  
(AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-677 264 6/5 6/13  
ARMY BIOLOGICAL LABS FREDERICK MD

CROSS-PROTECTION IN ANIMALS INFECTED WITH GROUP A  
ARBOVIRUSES.

(U)

OCT 62 6P HEARN, HENRY J. , JR. ;  
RAINEY, CULLEN T. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN JOURNAL OF IMMUNOLOGY  
V90 N5 P720-4 MAY 1963,  
SUPPLEMENTARY NOTE:

DESCRIPTORS: (GROUP A ARBOVIRUSES, IMMUNITY),  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS, SEMLIKI  
VIRUS, AEROSOLS, INJECTION(MEDICINE), DOSAGE,  
RESISTANCE(BIOLOGICAL), GUINEA PIGS, MICE

(U)

EXPERIMENTS WERE CARRIED OUT TO INVESTIGATE THE  
PHENOMENON OF CROSS-PROTECTION AMONG VENEZUELAN  
EQUINE ENCEPHALOMYELITIS (VEE), EASTERN EQUINE  
ENCEPHALOMYELITIS (EEE) AND SEMLIKI FOREST  
(SF) VIRUSES IN A VARIETY OF LABORATORY ANIMALS  
AFTER IMMUNIZATION BY THE INTRAPERITONEAL,  
SUBCUTANEOUS OR RESPIRATORY ROUTES; THE LAST WAS  
EFFECTED BY EXPOSING THE ANIMALS TO AEROSOLS OF  
VIRUS. ONE INJECTION OF AN ATTENUATED STRAIN OF  
VEE VIRUS (9T) PROTECTED GUINEA PIGS AGAINST A  
LETHAL CHALLENGE DOSE OF EEE OR SF VIRUS IN  
GUINEA PIGS AND MICE, RESPECTIVELY. TWO INJECTIONS  
OF LIVE SF VIRUS PROTECTED GUINEA PIGS AGAINST  
SMALL DOSES OF VEE OR EEE VIRUS. MICE  
VACCINATED WITH STRAIN 9T RESPONDED BY DEMONSTRATING  
RESISTANCE MECHANISMS THAT APPEARED TO OPERATE IN  
SERIES. THIS CONSISTED OF, FIRST, AN EARLY  
NONSPECIFIC INTERFERENCE PHASE, FOLLOWED BY A SECOND,  
SPECIFIC PHASE. THE SECOND PHASE ALSO INCLUDED A  
PARTIALLY SPECIFIC MECHANISM OF RESISTANCE OF UNKNOWN  
ORIGIN AND OF RELATIVELY LONG DURATION MANIFESTED AS  
CROSS-PROTECTION IN THE GROUP A VIRUSES.  
(AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-627 267 6/12  
ARMY BIOLOGICAL LABS FREDERICK MD

EFFECT OF ADJUVANTS ON ANTIBODY RESPONSE OF RABBITS  
INOCULATED WITH VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS. (U)

DEC 62 7P SHEPEL, MICHAEL IKLUGERMAN,  
MAXWELL R. :

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN JOURNAL OF BACTERIOLOGY  
V85 N5 P1150-5 MAY 1963.  
SUPPLEMENTARY NOTE:

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, ANTIGENS + ANTIBODIES), SERODIAGNOSIS,  
MYCOBACTERIUM, ELECTROPHORESIS, IMMUNE SERUMS,  
GAMMA GLOBULIN, PROTEINS, GLOBULINS, SERUM  
ALBUMIN, RABBITS (U)

IDENTIFIERS: HEMAGGLUTINATION-INHIBITION TESTS,  
COMPLEMENT-FIXATION TESTS (U)

HEMAGGLUTINATION-INHIBITION, NEUTRALIZATION, AND  
COMPLEMENT-FIXATION TESTS WERE PERFORMED ON SERA OF  
RABBITS INOCULATED WITH VENEZUELAN EQUINE  
ENCEPHALOMYELITIS (VEE) VIRUS IN COMBINATION WITH  
FREUND'S ADJUVANTS AND IN HANK'S SALT SOLUTION.  
THIS STUDY INDICATED THAT THE COMPLETE ADJUVANTS  
(I.E., WITH MYCOBACTERIA) CONSIDERABLY INCREASED  
THE ANTIBODY RESPONSE TO VEE VIRUS.  
MYCOBACTERIUM BUTYRICUM (M. SMEGMATIS) APPEARED  
TO BE MORE EFFECTIVE THAN M. TUBERCULOSIS  
H37RA. IN THE ABSENCE OF MYCOBACTERIA, THE  
RESPONSE WAS MUCH LESS PRONOUNCED. PAPER  
ELECTROPHORETIC STUDIES OF THE ANTISERA DEMONSTRATED  
A MARKED INCREASE IN GAMMA-GLOBULIN PRODUCTION, AN  
INCREASE IN THE BETA-GLOBULIN, AND AN INCREASE IN  
TOTAL PROTEIN AS THE RESULT OF ADDING VEE VIRUS TO  
THE COMPLETE ADJUVANTS. A DECREASE IN THE ALBUMIN  
FRACTION APPEARED TO BE CAUSED BY THE COMPLETE  
ADJUVANTS RATHER THAN BY THE VEE VIRUS ITSELF.  
THE INCOMPLETE ADJUVANT (WITHOUT MYCOBACTERIA)  
PLUS VIRUS CONTRIBUTED LITTLE, IF ANY, STIMULATION  
TOWARD THE PRODUCTION OF GAMMA-GLOBULIN, NOR DID IT  
APPEAR TO AFFECT THE SERUM-ALBUMIN LEVELS.  
(AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-637 406 6/12  
ARMY BIOLOGICAL LABS FREDERICK MD

DIFFERENCES IN MAXIMUM AND MINIMUM PLAQUE-FORMING  
TEMPERATURES AMONG SELECTED GROUP A ARBORVIRUSES. (U)

JUL 62 11P BROWN, ARTHUR I

UNCLASSIFIED REPORT

AVAILABILITY: PUBLISHED IN VIROLOGY V21 N2 P262-72  
NOV 1962.

SUPPLEMENTARY NOTE:

DESCRIPTORS: (GROUP A ARBORVIRUSES, TEMPERATURE),  
GROWTH, VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS,  
EASTERN EQUINE ENCEPHALOMYELITIS VIRUS, THERMAL  
STABILITY, CULTURE MEDIA, MUTATIONS (U)

VENEZUELAN EQUINE ENCEPHALITIS (V) AND EASTERN  
EQUINE ENCEPHALITIS (E) VIRUSES SHOW DISTINCT  
PLAQUE FRONTS AT MAXIMUM TEMPERATURES (TF-MAX) OF  
46 DEGREES. TWO ATTENUATED VARIANTS OF V (T AND  
A) SHOW A TF-MAX OF 42 DEGREES AND 48 DEGREES,  
RESPECTIVELY. ALL FOUR VIRUSES SHOWED INDISTINCT  
PLAQUE FRONTS AT A MINIMUM TEMPERATURE (TF-MIN)  
OF 24.5 DEGREES; UP TO 1% OF THE INOCULUM FORMED  
PLAQUES THAT WERE DISTRIBUTED BETWEEN THE TF-MIN AND  
20 DEGREES. FROM V INOCULATED PLATES, THE  
PROGENY DERIVED FROM ONE OF 31 PLAQUES SELECTED BELOW  
THE TF-MIN WAS AVIRULENT AND RESEMBLED T. T HAD A  
SELECTIVE ADVANTAGE OVER V IN PASSAGE EXPERIMENTS  
IN LIQUID CULTURES AT LOW TEMPERATURES. VIRULENT  
MUTANTS OF T, RESEMBLING V, WERE ISOLATED FROM  
PLAQUES BEYOND THE TF-MAX OF T ONLY AFTER  
OVERCOMING A REVERSIBLE INTERFERENCE EFFECT IN WHICH  
T INTERFERED WITH PLAQUE FORMATION OF V ABOVE THE  
TF-MAX. THE POSSIBLE RELATION OF TF-MAX AND TF-MIN  
TO VIRULENCE AMONG THESE VIRUSES IS DISCUSSED.  
(AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. 221MS;

AD-637 411 6/13  
ARMY BIOLOGICAL LABS FREDERICK MD

INACTIVATION OF TWO ARBOVIRUSES AND THEIR ASSOCIATED  
INFECTIOUS NUCLEIC ACIDS. (U)

JUN 62 9P MIKA, LEONARD A. :OFFICER,  
JULIUS E. :BROWN, ARTHUR :

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN JOURNAL OF INFECTIOUS  
DISEASES VII 3 P193-203 NOV-DEC 1963.  
SUPPLEMENTARY NOTE:

DESCRIPTORS: (:ARBOVIRUSES, :NUCLEIC ACIDS);  
(:EASTERN EQUINE ENCEPHALOMYELITIS VIRUS,  
VIABILITY), (:VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, VIABILITY), THERMAL PROPERTIES, NITRIC  
ACID, ULTRAVIOLET RADIATION, LIPOPROTEINS (U)

THE INACTIVATION OF 2 DISTINCT BUT RELATED  
ARBOVIRUSES (EASTERN AND VENEZUELAN EQUINE  
ENCEPHALITIS) BY HEAT (50 C), NITROUS ACID  
(HNO<sub>2</sub>), AND ULTRAVIOLET LIGHT WAS STUDIED IN  
RELATION TO THE INFECTIOUS RIBONUCLEIC ACID (RNA).  
THE 2 VIRUSES COULD BE DISTINGUISHED BY THEIR HEAT  
INACTIVATION CURVES. ALTHOUGH THE CURVES FOR BOTH  
VIRUSES WERE APPROXIMATELY BIPHASIC, THEIR PHASES  
WERE REVERSED. THE HEAT INACTIVATION RATES OF  
RECOVERABLE RNA (FROM THE HEATED VIRUS PARTICLE)  
AND OF EXTRACTED RNA (FROM UNHEATED VIRUS) WERE  
LESS THAN THOSE FOR THE VIRUS. THE RESULTS  
SUGGESTED THAT HEAT ACTS FIRST ON THE SURFACE  
(LIPOPROTEIN) COMPONENT AND THEN ON THE NUCLEIC  
ACID. THE KINETICS OF INACTIVATION OF THE 2  
VIRUSES AND THEIR RNA'S BY HNO<sub>2</sub> SUGGESTED THAT  
INACTIVATION OF BOTH SURFACE PROTEIN AND NUCLEIC ACID  
BEGAN SIMULTANEOUSLY BUT THAT THE LATTER INACTIVATION  
WAS SLOWER. THE RESPECTIVE VIRUSES AND THEIR  
RECOVERABLE RNA COULD BE DISTINGUISHED BY THEIR  
RATES OF INACTIVATION. THE RESULTS WITH  
ULTRAVIOLET IRRADIATION AGREED WITH THE CONCEPT OF  
PRIMARY DAMAGE TO THE NUCLEIC ACID. (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-698 425 6/12  
ARMY BIOLOGICAL LABS FREDERICK MD

ABILITY OF A FISH CELL LINE TO SUPPORT THE GROWTH OF  
MAMMALIAN VIRUSES. (U)

JAN 64 SP OFFICER, JULIUS E. I

UNCLASSIFIED REPORT

AVAILABILITY: PUBLISHED IN PROCEEDINGS OF THE  
SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE V116  
P190-4 1964.

SUPPLEMENTARY NOTE:

DESCRIPTORS: (1) TISSUE CULTURE CELLS, FISHES),  
(1) EQUINE ENCEPHALOMYELITIS VIRUS, TISSUE CULTURE),  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS, EASTERN  
EQUINE ENCEPHALOMYELITIS VIRUS, SEX GLANDS,  
GROWTH (U)

A FISH CELL LINE DERIVED FROM RAINBOW TROUT GONADS  
(RTG) HAS BEEN SHOWN TO SUPPORT THE PROLIFERATION  
OF 2 ARBOVIRUSES, VENEZUELAN EQUINE ENCEPHALITIS  
(VEE) VIRUS AND EASTERN EQUINE ENCEPHALITIS  
(EEE) VIRUS, AT 22C. EEE VIRUS WAS MORE  
CYTOPATHOGENIC FOR RTG CULTURES THAN VEE VIRUS,  
THUS MAKING IT FEASIBLE TO DISTINGUISH BETWEEN THE  
TWO. A PERSISTENT INFECTION WAS OBTAINED WITH VEE  
VIRUS FOR AS LONG AS CULTURES WERE CARRIED, BUT NOT  
WITH EEE VIRUS. BOTH VIRUSES MULTIPLIED IN CHICK  
FIBROBLAST (CF) CELLS AT 22C TO SLIGHTLY HIGHER  
TITERS THAN IN THE FISH CELL LINE AND BOTH VIRUSES  
CAUSED A CYTOPATHOGENIC EFFECT IN CF CELLS. L  
CELLS FAILED TO SUPPORT THE GROWTH OF EITHER VIRUS  
AT 22C. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-676 563 6/12  
ARMY BIOLOGICAL LABS FREDERICK MD

DEFINED MAINTENANCE MEDIUM FOR SUPPORTING CHICK  
FIBROBLAST MONOLAYERS AND FOR PLAQUE FORMATION BY  
VENEZUELAN AND EASTERN EQUINE ENCEPHALITIS VIRUSES. (U)

AUG 64 6P ZBOVITZ, EUGENE I

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN JOURNAL OF INFECTIOUS  
DISEASES V119 P77-82 FEB 1969.  
SUPPLEMENTARY NOTE:

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, GROWTH); (EASTERN EQUINE ENCEPHALOMYELITIS  
VIRUS, GROWTH); (CULTURE MEDIA, EQUINE  
ENCEPHALOMYELITIS VIRUS); TISSUE CULTURE,  
VIABILITY (U)

A DEFINED MAINTENANCE MEDIUM THAT SUPPORTS CHICK  
FIBROBLAST (CF) CELL MONOLAYERS IN A VIABLE STATE  
FOR AT LEAST 10 DAYS AND PERMITS THE FORMATION OF  
PLAQUES BY VENEZUELAN (VEE) AND EASTERN (EEE)  
EQUINE ENCEPHALITIS VIRUSES IS DESCRIBED. THE  
MEDIUM CONSISTS OF A BALANCED SALTS SOLUTION,  
GLUCOSE, 2 AMINO ACIDS (L-CYSTINE AND L-HISTIDINE  
HCl), SODIUM BICARBONATE, AND AGAR. PLAQUE  
COUNTS BY VEE AND EEE VIRUSES ON CF MONOLAYERS  
OVERLAID WITH THIS MEDIUM COMPARED FAVORABLY WITH  
THOSE OBTAINED ON A COMPLEX OVERLAY MEDIUM,  
(AUTHOR) (U)



UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-670 552 6712 673  
ARMY BIOLOGICAL LABS FREDERICK MD

SUSCEPTIBILITY OF WHITE CARNEAU PIGEONS TO  
RESPIRATORY INFECTION BY VENEZUELAN EQUINE  
ENCEPHALITIS VIRUS.

(U)

APR 65 6P MILLER, WILLIAM S. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN AMERICAN JOURNAL OF  
EPIDEMIOLOGY V83 N1 P48-52 1965.  
SUPPLEMENTARY NOTE:

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, \*PIGEONS), RESPIRATORY DISEASES, DOSAGE,  
IMMUNITY, ANTIGENS \* ANTIBODIES, SERODIAGNOSIS,  
AEROSOLS

(U)

WHITE CARNEAU PIGEONS WERE FOUND TO BE  
SUSCEPTIBLE TO RESPIRATORY INFECTION BY VENEZUELAN  
EQUINE ENCEPHALITIS VIRUS. WITH DOSES AS LOW AS 274  
HOUSE INTRACEREBRAL LD50 UNITS INHALED, 7 OF 8  
BIRDS EXHIBITED VIREMIAS THAT APPROACHED 100,000  
MICLD50 UNITS PER ML OF BLOOD. VIREMIAS  
GENERALLY PERSISTED THROUGH THE THIRD DAY AFTER  
EXPOSURE. BIRDS WERE NOT OBVIOUSLY ILL AND SHOWED  
SEROLOGIC EVIDENCE OF IMMUNIZING INFECTIONS.  
(AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM91

AD-641 927 6/12  
ARMY BIOLOGICAL LABS FREDERICK MD

HEMAGGLUTINATION-INHIBITION METHOD AND  
IMMUNOFLOUORESCENCE STAINING WITH VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS, (U)

OCT 65 7P SHEPEL, MICHAEL I

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN APPLIED MICROBIOLOGY  
V14 N3 P246-52 MAY 1966.

DESCRIPTORS: (SERODIAGNOSIS, VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS), FLUORESCENT ANTIBODY  
TECHNIQUES, EFFECTIVENESS, TEST METHODS, IMMUNE  
SERUMS (U)  
IDENTIFIERS: HEMAGGLUTINATION-INHIBITION TESTS (U)

HEMAGGLUTINATION AND FLUORESCENT ANTIBODY (FA)  
ARE COMPARED FOR THE DIRECT DETECTION OF VIRUS DEVOID  
OF HOST CELLS. A DETERMINATION WAS MADE OF THE  
MINIMAL NUMBER OF TISSUE PLAQUE-FORMING UNITS OF  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS THAT  
COULD BE DETECTED BY THE HEMAGGLUTINATION TECHNIQUE.  
SIMILAR CONCENTRATIONS OF THE VIRUS IN BOVINE  
ALBUMIN BORATE SALINE, BRAIN HEART INFUSION  
BROTH (DIFCO), AND DEMINERALIZED WATER WERE  
TESTED BY THE FA TECHNIQUE. SOMEWHAT HIGHER  
CONCENTRATIONS OF THE VIRUS IN BOVINE ALBUMIN BORATE  
SALINE WERE USED IN THE HEMAGGLUTINATION-INHIBITION  
TEST. THE QUANTITATIVE HEMAGGLUTINATION PROCEDURE  
EMPLOYED FOR THESE STUDIES WAS CARRIED OUT AT 27 C  
FOR 75 MIN WITH VARIATIONS IN CONCENTRATION OF GOOSE  
RED CELLS. AS A RESULT OF LOWERING THE RED CELL  
CONCENTRATION, SMALLER CONCENTRATIONS OF VIRUS WERE  
DETECTED. THE DIRECT FA STAINING PROCEDURE  
APPLIED TO SLIDE PREPARATIONS CONTAINING KNOWN  
NUMBERS OF TISSUE CULTURE PLAQUE-FORMING UNITS OF  
VIRUS WAS NEGATIVE. ADSORBED VIRAL ANTIGEN ON  
AGGLUTINATED GOOSE ERYTHROCYTES WAS VISUALIZED BY  
DIRECT AND INDIRECT FA TECHNIQUES. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-641 938 6/13  
ARMY BIOLOGICAL LABS FREDERICK MD

MODIFIED GRADIENT PLATE FOR USE IN THE VIRUS PLAQUE  
TECHNIQUE, (U)

DEC 65 2P SOPER, WILLIAM T. 1

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN APPLIED MICROBIOLOGY  
V14 N3 P470-1 MAY 1966.

DESCRIPTORS: (1) VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, GROWTH; CULTURE MEDIA; LABORATORY  
EQUIPMENT; IMMUNE SERUMS; BACTERIA;  
RESISTANCE (BIOLOGICAL); ANTIBIOTICS (U)

THE REPORT DESCRIBES THE PRELIMINARY RESULTS  
OBTAINED IN AN APPLICATION OF THE GRADIENT PLATE  
CONCEPT TO THE VIRUS PLAQUE TECHNIQUE. IN THIS  
TEST SYSTEM IMMUNE SERUM WAS USED AS AN INHIBITOR OF  
PLAQUE FORMATION BY VENEZUELAN EQUINE  
ENCEPHALOMYELITIS (VEE) VIRUS. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-641 944 6/12  
ARMY BIOLOGICAL LABS FREDERICK MD

HOST INFLUENCE ON THE CHARACTERISTICS OF VENEZUELAN  
EQUINE ENCEPHALOMYELITIS VIRUS, (U)

JAN 66 7P HEYDRICK, FRED P. IWACHTER,  
RALPH F. HEARN, HENRY J. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN JOURNAL OF BACTERIOLOGY  
V91 N6 P2742-8 JUN 1966.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, TISSUE CULTURE), VIABILITY, LIPIDS,  
TISSUE CULTURE CELLS (U)

ALTERATIONS IN PLAQUE SIZE, VIRULENCE, AND LIPID  
CONTENT OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
(VEE) VIRUS WERE EXAMINED FOR POSSIBLE  
INTERRELATIONSHIPS AMONG THESE PROPERTIES DURING 10  
SERIAL PASSAGES IN EMBRYONATED EGGS, SUCKLING MICE,  
CHICK EMBRYO FIBROBLASTS, AND L CELLS. THE CHICK  
EMBRYO HOST MAINTAINED THE SAME LARGE-PLAQUE AND  
VIRULENCE PROPERTIES OF THE VIRUS THROUGH 10 PASSAGES  
AS SEEN IN THE ORIGINAL SEED. PASSAGE OF VIRUS IN  
EITHER L CELLS OR CHICK FIBROBLASTS RAPIDLY  
PRODUCED POPULATIONS THAT WERE, IN THE MAIN,  
INTERMEDIATE WITH RESPECT TO PLAQUE SIZE AND  
VIRULENCE. PASSAGE OF VIRUS IN SUCKLING MOUSE  
BRAIN YIELDED POPULATIONS THAT WERE INTERMEDIATE WITH  
RESPECT TO PLAQUE SIZE ONLY. THE NATURE OF THE  
LIPID OF THE VIRUS, IN TERMS OF THE RATIO OF  
PETROLEUM ETHER-SOLUBLE TO-INSOLUBLE LIPID, CHANGED  
AFTER ONLY ONE PASSAGE IN ALL SYSTEMS EXCEPT IN CHICK  
EMBRYOS. NINE ADDITIONAL SERIAL PASSAGES FAILED TO  
ENHANCE THESE CHANGES IN VIRAL LIPID, SUGGESTING THAT  
THE DECREASE IN THE LARGE-PLAQUE AND VIRULENCE  
PROPERTIES WAS NOT DIRECTLY ASSOCIATED WITH CHANGES  
IN LIPID CONTENT. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMB1

AD-641 952 6/12  
ARMY BIOLOGICAL CENTER FREDERICK MD

EFFECT OF SODIUM BICARBONATE ON PLAQUE FORMATION BY  
TWO STRAINS OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, (U)

JAN 66 4P SOPER, WILLIAM THOMAS I

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN CANADIAN JOURNAL OF  
MICROBIOLOGY V12 P872-3 1966.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, INHIBITION), SODIUM COMPOUNDS,  
BICARBONATES, GROWTH, CULTURE MEDIA (U)

RESULTS SUPPORT THE CONCLUSION OF COLON ET AL.  
THAT AN AGAR INHIBITOR IS RESPONSIBLE FOR THE 9T  
STRAIN PLAQUE SIZE; INHIBITION OCCURS OVER A WIDE  
RANGE OF BICARBONATE CONCENTRATION. HOWEVER, IT  
WAS FOUND THAT PES STRAIN PLAQUES ARE ALSO REDUCED  
IF A LOW BICARBONATE CONCENTRATION IS USED IN THE  
OVERLAY. PRESUMABLY, THE AGAR INHIBITOR IS ACTIVE  
AGAINST THE PES STRAIN ONLY IF THE BICARBONATE  
LEVEL IN THE OVERLAY IS LOW. THIS FINDING SUPPORTS  
THOSE OF AGOL AND CHUMAKOVA, AND LIEBHABER AND  
TAKEMOTO, DEMONSTRATING THAT AGAR INHIBITION CAN BE  
ABSENT WHEN BICARBONATE CONCENTRATION IS RELATIVELY  
HIGH. LIEBHABER AND TAKEMOTO SUGGESTED THAT  
SULFATED POLYSACCHARIDES MIGHT PREVENT PLAQUE  
FORMATION BY VIRUSES THAT ARE NORMALLY CYTOPATHIC IN  
LIQUID CULTURES. IN THIS SENSE, IT IS NOTEWORTHY  
THAT THE 9T STRAIN IS MORE CYTOPATHIC IN L-CELL OR  
CHICK FIBROBLAST FLUID CULTURES THAN IS THE PES  
STRAIN. THE OBSERVATIONS REPORTED HERE EMPHASIZE  
THE IMPORTANCE OF BICARBONATE (PH AND IONIC  
STRENGTH) IN ASSAYING FOR INHIBITION BY AGAR-  
ASSOCIATED FACTORS AND FOR ACCURATELY ASSESSING  
PLAQUE SIZE AS A GENETIC PROPERTY RATHER THAN A  
PHENOTYPIC CHARACTER. (AUTHOR) (U)

UNCLASSIFIED

DOC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS;

AD-642 077 6/17  
ARMY BIOLOGICAL LABS FREDERICK MD

DYNAMICS OF MULTIPLICATION OF THE VEE VIRUS IN TISSUE  
CULTURE CELLS, (U)

SEP 68 11P ERSKOV, F. E. IVAGZHANOVA, V. A.  
IVANOVSKAGO, D. I. ;  
DEPT. NO. TRANS-1749  
MONITOR: NCH 205 769

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF VOPROSY VIRUSOLOGII  
(USSR) VIO N2 P176-80 1968.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, TISSUE CULTURE CELLS), GROWTH, TISSUE  
CULTURE, EMBRYOS, MORPHOLOGY (BIOLOGY), IMMUNE  
SERUMS, AGGLUTININS, ERYTHROCYTES, DIAGNOSIS,  
ANTIGENS + ANTIBODIES, SERODIAGNOSIS, CYTOLOGY,  
USSR (U)

IDENTIFIERS: HEMAGGLUTINATION-INHIBITION TESTS,  
COMPLEMENT-FIXATION TESTS (U)

THE VIRUS OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
IS CAPABLE OF AGGLUTINATING GOOSE ERYTHROCYTES AT A  
PH OF 5.8--6.0. THE 'THRESHOLD OF INFECTIVITY'  
WHICH IS NECESSARY FOR THE EXPOSURE OF VEE  
HEMAGGLUTININS COMPRISES 4.6--5.7 LG TCD50 1,000,  
000--2,600,000 PLAQUE FORMING UNITS). THE REACTION  
OF HEMADSORPTION MAKES IT POSSIBLE TO EXPOSE THE  
MULTIPLICATION OF VEE IN 6--9 HOURS FOLLOWING  
INFECTION OF A SENSITIVE CULTURE. THE RGA AND  
THE REACTION OF HEMADSORPTION MAY BE USED FOR  
DETERMINING THE DYNAMICS OF MULTIPLICATION OF VEE  
AND THE EARLY DIAGNOSIS OF THIS VIRUS. A  
PROLONGED LIBERATION OF VIRUS PARTICLES INTO THE  
SURROUNDING MEDIUM IS CHARACTERISTIC FOR VEE.  
(AUTHOR) (U)

UNCLASSIFIED

DOC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-642 471 6/12 6/2  
ARMY BIOLOGICAL CENTER FREDERICK MD

INFECTION OF PIGEONS BY AIRBORNE VENEZUELAN EQUINE  
ENCEPHALITIS VIRUS, (U)

SEP 66 BP MILLER, WILLIAM S. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN BACTERIOLOGICAL REVIEWS  
V20 N3 P589-95 SEP 1966.

DESCRIPTORS: (PIGEONS, \*VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS), VIRUS DISEASES, AEROSOLS,  
RESPIRATION, INJECTION(MEDICINE), DRUGS,  
EFFECTIVENESS, DOSAGE, EPIDEMIOLOGY,  
ANTIBIOTICS, OXYTETRACYCLINE (U)

CONTENTS: COMPARATIVE SUSCEPTIBILITY OF FOWL TO  
AEROSOLS OF VEE VIRUS; COMPARISON OF RESPONSES  
AFTER INHALATION AND INJECTION OF VEE VIRUS;  
BIRD-TO-BIRD TRANSMISSION OF VIRUS; EFFECT OF  
EXPOSURE TIME ON RESPONSE TO INFECTION; EFFECT OF  
ANTIMICROBIAL DRUGS ON SUSCEPTIBILITY; CONCLUSIONS  
AND DISCUSSION. (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-642 476 6/12 6/2  
ARMY BIOLOGICAL LABS FREDERICK MD

STUDIES OF THE RESPONSE OF WHITE CARNEAU PIGEONS TO  
RESPIRATORY AND SUBCUTANEOUS DOSES OF VENEZUELAN  
EQUINE ENCEPHALITIS VIRUS, (U)

FEB 66 12P MILLER, WILLIAM S. 1

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN AMERICAN JOURNAL OF  
EPIDEMIOLOGY VOL 82 P181-92 1966.

DESCRIPTORS: (•PIGEONS, •VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS), ANTIGENS + ANTIBODIES,  
IMMUNITY, RESPIRATION, DOSAGE, AEROSOLS (U)

THE ABILITY OF VENEZUELAN EQUINE ENCEPHALITIS  
(VEE) VIRUS TO INDUCE FORMATION OF PROTECTIVE SERUM  
NEUTRALIZING (SN) ANTIBODIES WAS STUDIED IN WHITE  
CARNEAU PIGEONS. AMONG BIRDS RECEIVING VIRUS BY  
THE RESPIRATORY ROUTE, AN INHALED DOSE OF 3,713  
MICROSO UNITS PRESENTED IN ONE MINUTE RESULTED IN  
BOTH VIREMIC AND SEROLOGIC RESPONSE IN 60 TO 80 PER  
CENT OF THE BIRDS TESTED. THE BIRDS DID NOT  
RESPOND TO A SUBSEQUENT CHALLENGE OF 3,279 MICROSO  
INHALED, INDICATING A DEGREE OF IMMUNITY TO VEE  
VIRUS INFECTION. BIRDS RECEIVING VIRUS BY  
SUBCUTANEOUS INJECTION RESPONDED SIMILARLY TO THE  
RESPIRATORY GROUP IN TERMS OF LEVEL AND DURATION OF  
VIREMIA AND SERUM NEUTRALIZING ANTIBODIES. SN  
TITERS WERE FOLLOWED FOR 112 DAYS AFTER EXPOSURE TO  
OR INJECTION OF VIRUS. THE TIME OF THE FIRST  
APPEARANCE OF ANTIBODIES AND THE SUBSEQUENT INCREASE  
IN TITERS WERE ALMOST IDENTICAL FOR THE TWO ROUTES.  
FURTHER, BIRDS SHOWING VIREMIAS AFTER INFECTION BY  
BOTH ROUTES HAD VIRUS IN THE ORAL CAVITY. BECAUSE  
OF THIS LATTER FACTOR, COUPLED WITH SUSCEPTIBILITY TO  
AEROSOLS, IT WAS POSSIBLE THAT GENERAL BIRD-TO-BIRD  
TRANSMISSION OF VEE VIRUS INFECTION COULD BE  
DEMONSTRATED. THAT OBJECTIVE, HOWEVER, WAS NOT  
MET. SUBSEQUENT EXPERIMENTS WERE CONDUCTED TO  
DETERMINE WHETHER OR NOT DOSAGE RATE WAS CRITICAL TO  
INFECTION. THE RESULTS INDICATED THAT VIREMIC AND  
SEROLOGIC RESPONSES COULD NOT BE PRODUCED UNLESS THE  
DOSAGE RATE EQUALED THE MINIMUM INFECTIVE DOSE PER  
MINUTE, REGARDLESS OF THE TOTAL DOSE INHALED.  
(AUTHOR) (U)



UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-648 826 6/1 6/13  
FORT DETRICK FREDERICK MD

EFFECTS OF METHYLATED ALBUMIN ON INFECTIOUS RNA:  
REVERSIBLE INFECTIVITY LOSS AND RESISTANCE TO  
NUCLEASE DIGESTION, (U)

JAN 67 SP NORRELL, STEPHEN A. ICOSTLOW,  
RICHARD D. I

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN BIOCHEMICAL AND  
BIOPHYSICAL RESEARCH COMMUNICATIONS V26 N4 P481-5  
1967.

DESCRIPTORS: (RIBONUCLEIC ACIDS; \*INFECTIOUS  
DISEASES), VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, ENZYMES, INFECTIONS, BIOLOGICAL ASSAY,  
TISSUE CULTURE, SERUM ALBUMIN, BOVINES (U)

THE DOCUMENT IS A REPORT OF SOME INVESTIGATIONS ON  
THE EFFECT OF METHYLATED BOVINE SERUM ALBUMIN  
(MBSA) ON THE INFECTIVITY AND ENZYMATIC DIGESTION  
OF INFECTIOUS RIBONUCLEIC ACID (IRNA) FROM THE  
TRINIDAD STRAIN OF VENEZUELAN EQUINE ENCEPHALITIS  
(VEE) VIRUS. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-650 187 6/13  
FORT DETRICK FREDERICK MD

TEMPERATURE-SENSITIVE STEPS IN THE BIOSYNTHESIS OF  
VENEZUELAN EQUINE ENCEPHALITIS VIRUS, (U)

NOV 66 SP ZBOVITZ, EUGENE ; BROWN,  
ARTHUR ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN JOURNAL OF VIROLOGY  
VI N1 P120-24 FEB 1967.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, BIOSYNTHESIS), TEMPERATURE, EMBRYONATED  
EGG TECHNIQUE, RIBONUCLEIC ACIDS, ANTIGENS +  
ANTIBODIES, FLUORESCENT ANTIBODY TECHNIQUES,  
INHIBITION, MUTATIONS, SENSITIVITY (U)

IN CONTRAST TO EASTERN EQUINE ENCEPHALITIS VIRUS,  
THE REPLICATION OF VENEZUELAN EQUINE ENCEPHALITIS  
(VEE) VIRUS WAS STRONGLY INHIBITED AT 44C IN  
CHICK EMBRYO CELLS. THE INHIBITED STEPS WERE  
ANALYZED BY SHIFTING THE INCUBATING TEMPERATURES UP  
OR DOWN, AND BY DETERMINING DURING THE SHIFTS THE  
RATE AND EXTENT OF INFECTIONOUS RIBONUCLEIC ACID (RNA)  
SYNTHESIS, INTACT VIRUS SYNTHESIS, AND FORMATION OF  
COMPLEMENT-FIXING ANTIGEN OR OF ANTIGEN DETECTABLE BY  
A DIRECT FLUORESCENT-ANTIBODY TECHNIQUE. THE  
INHIBITION APPEARED TO BE DUE TO TWO TEMPERATURE-  
SENSITIVE STEPS INVOLVED IN THE SYNTHESIS OF VEE  
VIRUS IN CHICK EMBRYO CELLS. THE FIRST STEP OF  
INHIBITION AT 44C OCCURRED EARLY IN VIRUS  
REPLICATION AND COULD BE COMPLETELY REVERSED SIMPLY  
BY TRANSFERRING CULTURES TO 27C. THE INHIBITION  
APPEARED TO TAKE PLACE AT SOME POINT BETWEEN THE TIME  
WHEN THE VIRUS ENTERED THE CELL AND WAS UNCOATED AND  
THE BEGINNING OF VIRAL RNA SYNTHESIS. THE SECOND  
TEMPERATURE-SENSITIVE STEP IN VEE VIRUS SYNTHESIS  
WAS IRREVERSIBLE; IT OCCURRED AT A POINT AFTER THE  
SYNTHESIS OF VIRAL RNA, AND BEFORE THE FORMATION OF  
VIRUS PROTEIN MEASURED AS COMPLEMENT-FIXING ANTIGEN  
OR AS ANTIGEN THAT COULD BE STAINED WITH FLUORESCENT  
ANTIBODY. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-652 672 6/12  
ARMY BIOLOGICAL LABS FREDERICK MD

EARLY DETECTION OF ARBOVIRUSES IN TISSUE CULTURES BY  
HEMAGGLUTINATION, (U)

JUL 66 SP GAIDAMOVICH, S. YA I  
VAGZHANOVA, V. A. I  
REPT. NO. TRANS-1819  
MONITOR: TT 67-62049

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF VOPROSY VIROLOGII  
(USSR) V9 N6 P712-4 1964.

DESCRIPTORS: (ARBOVIRUSES, TISSUE CULTURE);  
AGGLUTININS, SERODIAGNOSIS, VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS, WESTERN EQUINE  
ENCEPHALOMYELITIS VIRUS, EMBRYONATED EGG TECHNIQUE,  
CYTOLOGY, PH, USSR (U)

THE HEMAGGLUTINATION REACTION WITH THE VIRUS OF  
VENEZUELAN ENCEPHALOMYELITIS AND THE WESTERN  
VARIANT OF AMERICAN EQUINE ENCEPHALOMYELITIS,  
INCUBATED IN TISSUE CULTURES OF CHICK FIBROBLASTS,  
TAKES PLACE AT 4C IN A PH ZONE OF 5.4--6.6;  
OPTIMUM PH 5.8--6.0. DURING INFECTION OF THE  
CULTURES WITH LARGE DOSES OF VIRUS WITHIN THE LIMITS  
OF 10 TO THE 7TH POWER TO 10 TO THE 9TH POWER CPD50  
THE HEMAGGLUTININS APPEAR IN THE CULTURAL FLUID IN 5-  
6 HOURS FOLLOWING INFECTION, AND THE CYTOPATHIC  
EFFECT IS DETECTED AFTER 24 HOURS. THE  
HEMAGGLUTINATION PHENOMENON MAY BE USED FOR THE EARLY  
DETECTION OF A VIRUS IN CULTURES. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-655 170 6/12  
FORT DETRICK FREDERICK MD

PROPERTIES OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS ACCOMPANYING ATTENUATION IN VITRO, (U)

DEC 66 8P HEARN, HENRY J. , JR.;  
SOPER, WILLIAM T. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN JOURNAL OF VIROLOGY  
V1 N3 P453-9 JUN 1967.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, IN VITRO ANALYSIS), VIABILITY, GROWTH,  
MICE, ATTENUATION, DISEASES, IDENTIFICATION,  
TISSUE CULTURE (U)

VIRUS OBTAINED DURING SERIAL PLAQUE PASSAGE OF THE  
VIRULENT PARENT EGG SEED (PES) OF THE TRINIDAD  
STRAIN OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
(VEE) VIRUS PRODUCED ONLY LARGE PLAQUES DURING  
EITHER 2 SERIAL PLAQUE PASSAGES IN CHICK FIBROBLASTS  
OR 10 PLAQUE PASSAGES IN L CELLS, AND WAS LETHAL  
FOR MICE BY THE INTRAPERITONEAL ROUTE. VIRUS  
SHOWING THESE CHARACTERISTICS WAS DESIGNATED THE  
STABLE LARGE-PLAQUE (LS) TYPE. IN CONTRAST,  
VIRUS OBTAINED DURING SERIAL PLAQUE PASSAGE OF THE  
ATTENUATED 9T STRAIN IN CHICK FIBROBLASTS FORMED ONLY  
VERY SMALL PLAQUES AND WAS NOT LETHAL FOR MICE BY THE  
INTRAPERITONEAL ROUTE. VIRUS SHOWING THESE  
PROPERTIES WAS DESIGNATED THE STABLE SMALL-PLAQUE  
(SS) TYPE. UNDER OTHER PASSAGE CONDITIONS,  
HOWEVER, LARGE-PLAQUE VIRUS THAT YIELDED ABOUT 90%  
LARGE AND 10% SMALL PLAQUES WAS OBTAINED; THIS  
VIRUS WAS DESIGNATED THE UNSTABLE LARGE OR LU TYPE  
BECAUSE IT DIFFERED FROM THE LS TYPE, WHICH YIELDED  
ONLY LARGE PLAQUES. THE LU TYPE CONTINUED TO  
YIELD THE SAME RATIO OF LARGE TO SMALL PLAQUES FOR  
SEVERAL PLAQUE-TO-PLAQUE PASSAGES. IN ADDITION,  
SMALL-PLAQUE VIRUS THAT YIELDED BOTH LARGE AND SMALL  
PLAQUES AND THAT SHOWED A REDUCED CAPABILITY TO  
INFECT MICE WAS ALSO RECOVERED. THIS VIRUS WAS  
DESIGNATED THE UNSTABLE SMALL OR SU TYPE BECAUSE IT  
DIFFERED FROM THE SS TYPE IN ITS HIGHER LEVEL OF  
VIRULENCE AND IN ITS PLAQUE-FORMING PROPERTIES.  
THUS, BASED UPON THE PROPERTIES OF VIRULENCE FOR  
MICE AND PLAQUE SIZE, FOUR VIRAL TYPES COULD BE  
DISCERNED. THE EVIDENCE SUGGESTS THAT SERIAL  
PASSAGE IN CELL CULTURE IMPOSED ENVIRONMENTAL  
PRESSURES THAT SEQUENTIALLY SELECTED THE FOLLOWING  
VIRAL TYPES: LS, LU, SU, AND SS. (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-695 171 6/13  
FORT DETRICK FREDERICK MD

PROPERTIES OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS GROWN IN VIVO, (U)

DEC 66 7P SOPER, WILLIAM T. HEARN,  
HENRY J. , JR.

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN JOURNAL OF VIROLOGY  
V1 N2 P46-09 JUN 1967.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, IN VIVO ANALYSIS), GROWTH, TISSUE  
CULTURE, MICE, VIABILITY, BRAIN, SPLEEN,  
DISEASES (U)

ONE INTRACEREBRAL PASSAGE OF EITHER THE PARENT EGG  
SEED (PES) OR AN ATTENUATED VARIANT (10T) OF  
THE TRINIDAD STRAIN OF VENEZUELAN EQUINE  
ENCEPHALOMYELITIS (VEE) VIRUS IN YOUNG ADULT MICE  
PRODUCED PROGENY THAT WERE NO LONGER DIFFERENTIATED  
UNEQUIVOCALLY ON THE BASIS OF PLAQUE SIZE. PLAQUES  
AVERAGING ABOUT 2 MM IN DIAMETER, WHICH WAS SOMEWHAT  
SMALLER THAN THOSE FORMED BY THE PES VIRUS AND  
LARGER THAN THOSE OF THE 10T STRAIN, WERE FORMED BY  
BOTH STRAINS. SEVEN SERIAL PASSAGES OF THE PES  
VIRUS IN MOUSE BRAIN FAILED TO ALTER ITS VIRULENCE  
APPRECIABLY. IN CONTRAST, PASSAGE IN MOUSE BRAIN  
PROGRESSIVELY CHANGED THE PROPERTIES OF THE  
ATTENUATED 10T STRAIN. A SUBSTRAIN WAS ISOLATED  
THAT POSSESSED VIRULENCE SIMILAR TO THAT OF THE PES  
VIRUS AND FORMED SMALL PLAQUES SIMILAR TO THOSE OF  
THE 10T STRAIN. THESE FINDINGS SHOWED A UNIQUE  
DISSOCIATION BETWEEN THE PLAQUE SIZE AND VIRULENCE OF  
THE 10T STRAIN. THE NEW SUBSTRAIN DIFFERED FROM  
THE PES VIRUS AND THE 10T STRAIN IN ITS CAPACITY  
FOR GROWTH IN MOUSE TISSUES AFTER INTRAPERITONEAL  
INOCULATION. THE SUBSTRAIN MULTIPLIED POORLY IN  
SPLENIC TISSUE, WHICH SUPPORTS GROWTH OF THE PES  
AND 10T STRAINS, BUT GREW TO HIGH TITERS IN THE  
BRAIN, WHICH DOES NOT SUPPORT APPRECIABLE GROWTH OF  
THE 10T STRAIN. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-695 696 6/12  
FORT DETRICK FREDERICK MD

PRIMARY VIRUS-CELL INTERACTIONS IN THE  
IMMUNOFLOUORESCENCE ASSAY OF VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS,

(U)

JAN 67 10P HAHON, NICHOLAS ; COOKE,  
KENNETH O. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN JOURNAL OF VIROLOGY  
V1 N2 P217-26 APR 1967.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, COUNTING METHODS), FLUORESCENCE, PH,  
TEMPERATURE, BIOLOGICAL ASSAY, IMMUNE SERUMS,  
PENETRATION, FLUORESCENT ANTIBODY TECHNIQUES

(U)

THE CONDITIONS UNDER WHICH VENEZUELAN EQUINE  
ENCEPHALOMYELITIS (VEE) VIRUS ATTACHED TO HOST  
CELLS MARKEDLY INFLUENCED THE ASSAY OF VIRUS BY THE  
FLUORESCENT CELL-COUNTING TECHNIQUE. WHEN VIRUS  
INOCULUM WAS CENTRIFUGED ONTO MCCOY CELL  
MONOLAYERS, APPROXIMATELY 97% OF VIRUS WAS ATTACHED  
TO CELLS WITHIN 10 MIN, IN CONTRAST TO 34% AFTER  
STATIONARY INCUBATION AT 35 C FOR 2 HR. MAXIMAL  
BINDING OF VIRUS OCCURRED ONLY IN THE PRESENCE OF 0.1  
TO 0.15 M NaCl. THIS SALT REQUIREMENT, ADDED  
TO EVIDENCE OF PH DEPENDENCE AND TEMPERATURE  
INDEPENDENCE OF VEE VIRUS ATTACHMENT TO CELLS,  
INDICATED THAT THE INITIAL UNION INVOLVED  
ELECTROSTATIC FORCES. VIRUS PENETRATION, MEASURED  
BY THE INSENSITIVITY OF VIRUS-CELL COMPLEXES TO VIRAL  
ANTISERUM, WAS COMPLETE IN 20 MIN AT 35 C. THE  
PROCESS WAS TEMPERATURE-DEPENDENT AND UNAFFECTED BY  
THE IONIC CONTENT OF MEDIUM. FOR ASSAY OF VEE  
VIRUS BY THE FLUORESCENT CELL-COUNTING TECHNIQUE,  
INFECTED CELLS MAY BE ENUMERATED AS EARLY AS 12 HR  
AFTER INFECTION OF CELL MONOLAYERS. THE  
RELATIONSHIP BETWEEN VIRUS CONCENTRATION AND CELL-  
INFECTING UNITS WAS LINEAR; THE DISTRIBUTION OF  
FLUORESCENT CELLS WAS RANDOM. THE VIRUS ASSAY WAS  
EQUIVALENT IN SENSITIVITY BUT MORE PRECISE AND RAPID  
THAN THAT OF INTRACEREBRAL INOCULATION OF MICE.  
(AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-697 508 6/9 6/12  
ARMY MEDICAL UNIT FREDERICK MD

MOSQUITO-INDUCED INFECTION WITH EQUINE  
ENCEPHALOMYELITIS VIRUS IN DOGS,

(U)

67 4P BIVIN, W. S. ; BARRY, C. ;  
HOGGE, A. L. , JR. ; CORRISTAN, E. C. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN AMERICAN JOURNAL OF  
TROPICAL MEDICINE AND HYGIENE V16 N4 P544-7 1967.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, DISEASES), AEDES, INFECTIONS, DOGS,  
ANTIGENS + ANTIBODIES, SERODIAGNOSIS

(U)

DOGS INFECTED WITH VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS VIA THE BITE OF INFECTED  
AEDES TRISERIATUS RESPONDED WITH FEVER AND  
HEMAGGLUTINATION-INHIBITING ANTIBODIES. EVEN  
THOUGH HIGH TEMPERATURES WERE ELICITED IN 14 OF THE  
ANIMALS, IN ONLY SEVEN DID VIREMIA DEVELOP ABOVE 10  
TO THE 2.5 POWER HOUSE INTRAPERITONEAL MEDIAN LETHAL  
DOSE 50 PER ML. SUFFICIENT QUANTITIES OF  
MOSQUITOES WERE INFECTED FROM THE DOGS TO PERMIT  
PASSAGE OF THE VIRUS ON TO GUINEA PIGS. THERE WERE  
NO OTHER CLINICAL SIGNS OF ILLNESS OBSERVED IN THE  
ANIMALS. (AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-657 689 6/6 6/3 6/13  
FORT DETRICK FREDERICK MD

EFFECT OF APHOLATE AND METEPA ON AEDES AEGYPTI  
INFECTED WITH VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS,

(U)

67 6P KAPPUS, KARL D. I CORRISTAN,  
EDWIN C. I

UNCLASSIFIED REPORT

AVAILABILITY: PUBLISHED IN AMERICAN JOURNAL OF  
TROPICAL MEDICINE AND HYGIENE V16 N4 P539-42 1967.

DESCRIPTORS: (\*AEDES, \*INSECT CONTROL); VIRUS  
DISEASES, DISEASE VECTORS, VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS; REPRODUCTION (PHYSIOLOGY);  
INHIBITION, ENTOMOLOGY, VIABILITY, EGGS  
IDENTIFIERS: CHEMOSTERILANTS

(U)

(U)

GROUPS OF AEDES AEGYPTI FEMALE MOSQUITOES WERE  
FED 0.2% AND 0.025% CONCENTRATIONS OF APHOLATE AND  
METEPA. FOUR DAYS LATER THEY WERE FED A SOLUTION  
CONTAINING VEE VIRUS AND SWEETENED BLOOD. MALE  
MOSQUITOES WERE INTRODUCED ALSO AT THIS TIME.  
TREATMENT WITH THE 0.25% CONCENTRATIONS OF EITHER  
STERILIZING AGENT COMPLETELY INHIBITED OVIPOSITION.  
BOTH THE TOTAL NUMBER OF EGGS AND THE PERCENTAGE OF  
VIABLE EGGS IN THE GROUPS TREATED WITH 0.025%  
CONCENTRATIONS WERE A FRACTION OF THOSE DEPOSITED BY  
THE UNTREATED GROUPS. MORTALITY IN THE TREATED  
VECTORS, ESPECIALLY THOSE GIVEN THE 0.25%  
CONCENTRATIONS, WAS HIGHER THAN THAT IN THE UNTREATED  
MOSQUITOES. THE LOWER CONCENTRATIONS OF  
STERILIZING AGENTS HAD NO DEMONSTRABLE EFFECTS ON THE  
SUSCEPTIBILITY OF THE VECTORS TO VEE VIRUS OR ON  
SUBSEQUENT TRANSMISSION OF THE VIRUS.  
SUSCEPTIBILITY TO VIRUS INFECTION AND THE ABILITY  
TO TRANSMIT THE DISEASE WERE SIGNIFICANTLY INFLUENCED  
BY THE HIGHER CONCENTRATIONS OF BOTH COMPOUNDS.  
THE RESULTS SUGGEST THAT OTHER MOSQUITO VECTOR-  
ARBOVIRUS COMBINATIONS COULD DEMONSTRATE SIMILAR OR  
INCREASED POTENTIALS. (AUTHOR)

(U)



UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-664 203 6/17 6/18  
FORT DETRICK FREDERICK MD

INACTIVATION OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS BY GAMMA-RADIATION. (U)

JUL 67 4P REITHAN, MORTON ; TRIBBLE,  
HENRY R. ; JR;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN APPLIED MICROBIOLOGY  
V19 N6 P1456-9 NOV 1967.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, \*RADIATION EFFECTS), VIABILITY, TISSUE  
CULTURE, GAMMA RAYS, RADIOLOGICAL DOSAGE, LETHAL  
DOSAGE, ANTIGENS + ANTIBODIES (U)

EXPOSURE OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
(VEE) VIRUS (AT -70C) TO 6,000,000 R GAMMA-  
RADIATION (60CO) RESULTED IN LOSS OF LETHALITY  
FOR YOUNG ADULT MICE AND GUINEA PIGS, AND LOSS OF  
CAPACITY TO PRODUCE PLAQUES OR CYTOPATHIC EFFECTS IN  
TISSUE CULTURE. THE SUCKLING MOUSE WAS MORE  
SENSITIVE FOR DETECTING LIVE VIRUS IN RADIATED  
SUSPENSIONS THAN WAS THE ADULT MOUSE OR GUINEA PIG.  
LIVE VIRUS WAS DEMONSTRABLE IN PREPARATIONS EXPOSED  
TO 6,000,000 R BUT NOT IN SUSPENSIONS EXPOSED TO 8,  
000,000 R AND MORE. THE RATE OF INACTIVATION OF  
VEE VIRUS BY GAMMA-RADIATION WAS AN EXPONENTIAL  
FUNCTION OF THE DOSAGE. (AUTHOR) (U)

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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-664 223 6/12 6/9  
ARMY MEDICAL UNIT FREDERICK MD

LIVE, ATTENUATED VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS VACCINE, II. WHOLE-BLOOD AMINO-ACID AND  
FLUORESCENT-ANTIBODY STUDIES FOLLOWING IMMUNIZATION;  
(U)

67 10P FEIGN, RALPH D. ; JAEGER,  
ROBERT F. ; MCKINNEY, ROBERT W. ; ALEVIZATOS,  
ARISTIDES C. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN AMERICAN JOURNAL OF  
TROPICAL MEDICINE AND HYGIENE V16 N6 P769-77 1967.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, \*VACCINES), AMINO ACIDS, FLUORESCENT  
ANTIBODY TECHNIQUES, IMMUNITY, ATTENUATION,  
SERODIAGNOSIS, DIURNAL VARIATIONS, STATISTICAL  
ANALYSIS (U)

REPRINT: LIVE, ATTENUATED VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS VACCINE, II. WHOLE-BLOOD  
AMINO-ACID AND FLUORESCENT-ANTIBODY STUDIES FOLLOWING  
IMMUNIZATION.

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMB1

AD-664 842 6/9 6/14  
ARMY MEDICAL UNIT FREDERICK MD

EARLY ALTERATIONS IN THYROID HORMONE PHYSIOLOGY  
DURING ACUTE INFECTION IN MAN. (U)

DESCRIPTIVE NOTE: REVISED ED.;  
AUG 67 7P SHAMBAUGH, GEORGE E., III;  
BEISEL, WILLIAM R. I

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN JOURNAL OF CLINICAL  
ENDOCRINOLOGY AND METABOLISM V27 N12 P1667-72 DEC  
1967.  
SUPPLEMENTARY NOTE: REVISION OF MANUSCRIPT RECEIVED 12  
APR 67.

DESCRIPTORS: (•) THYROID HORMONES; (•) INFECTIOUS  
DISEASES; PASTEURILLA TULARENSIS; VENEZUELAN  
EQUINE ENCEPHALOMYELITIS VIRUS; THYROXINE; DISEASES;  
FEVERS; BLOOD PROTEINS; DEGRADATION; RESPONSES;  
VACCINES (U)  
IDENTIFIERS: PROTEIN-BOUND IODINE (U)

CERTAIN ASPECTS OF PERIPHERAL THYROID HORMONE  
PHYSIOLOGY WERE MEASURED SEQUENTIALLY IN SUBJECTS  
EXPOSED TO PASTEURILLA TULARENSIS OR VACCINATED  
WITH A LIVING ATTENUATED STRAIN OF VENEZUELAN  
EQUINE ENCEPHALOMYELITIS (VEE) VIRUS. IN BOTH  
GROUPS A SIGNIFICANT RISE IN THE PER CENT OF UNBOUND  
THYROXINE ( $P < 0.001$ ) WAS OBSERVED WITHIN 24 HR  
FOLLOWING EXPOSURE TO THE INFECTING AGENT. AN  
INTERPRETATION OF THESE OBSERVATIONS WAS ADVANCED  
THROUGH A HYPOTHESIS WHICH INCLUDED 4 DISTINCT  
SEQUENTIAL CHANGES: (1) A DECREASE IN THYROXINE  
BINDING BY SERUM PROTEINS AND AN ASSOCIATED INCREASE  
IN THYROID HORMONE UTILIZATION OR DEGRADATION;  
(2) A DELAY IN THYROID GLAND RESPONSE TO THESE  
EARLY CHANGES IN PERIPHERAL THYROID HORMONES FOLLOWED  
BY (3) A LATE RISE IN THE PBI FOLLOWING THE  
INSTITUTION OF THERAPY AND ONSET OF RECOVERY; AND  
(4) A FINAL RETURN OF THE PBI AND BINDING  
ALTERATIONS TO A NORMAL EQUILIBRIUM STATE SIMILAR TO  
THE PREINFECTION CONTROL. ALTHOUGH THESE CHANGES  
APPEARED TO BE NONSPECIFIC FOR INFECTION PER SE, A  
CONCEPT OF DYNAMIC ALTERATIONS IN PERIPHERAL THYROID  
HORMONE PHYSIOLOGY DURING INFECTION MIGHT SERVE TO  
CONSOLIDATE PREVIOUS CONCEPTS DERIVED FROM  
NONSEQUENTIAL OBSERVATIONS. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-665 236 6/4 6/13  
ARMY MEDICAL UNIT FREDERICK MD

LIVE, ATTENUATED VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS VACCINE. I. CLINICAL EFFECTS IN MAN, (U)

67 8P ALEVIZATOS, ARISTIDES C. ;  
MCKINNEY, ROBERT W. ; FEIGIN, RALPH D. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUBLISHED IN AMERICAN JOURNAL OF  
TROPICAL MEDICINE AND HYGIENE, V16 N6 P762-8 1967.

DESCRIPTORS: (+VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, +VACCINES), ATTENUATION, VIABILITY,  
IMMUNITY, SERODIAGNOSIS, ANTIGEN-ANTIBODY  
REACTIONS, ELECTROCARDIOGRAPHY,  
ELECTROENCEPHALOGRAPHY, BLOOD DISEASES, RESPONSES (U)

FORTY YOUNG MEN WERE INOCULATED WITH LIVE,  
ATTENUATED VEE VIRUS VACCINE, AND, AS EVIDENCED BY  
A SIGNIFICANT INCREASE IN HEMAGGLUTINATION-INHIBITING  
ANTIBODY TITERS, ALL WERE INFECTED. HOWEVER,  
VIREMIA WAS DEMONSTRATED IN ONLY 13. THE LEVEL OF  
VIREMIA WAS LOW, VARIED WITH TIME, AND OCCURRED  
BETWEEN 60 HOURS AND 12 DAYS AFTER VACCINATION.  
ALL SUBJECTS WERE EVALUATED CLOSELY FROM CLINICAL,  
LABORATORY, VIROLOGIC, AND SEROLOGIC STANDPOINTS.  
SOME DEGREE OF REACTION WAS SEEN IN 77.5% OF  
THESE PERSONS, 10% OF THEM HAVING A 3+ REACTION,  
OF A POSSIBLE 4+. VIREMIA WAS DEMONSTRATED IN  
32.5%. TRANSIENT ELECTROCARDIOGRAPHIC  
ABNORMALITIES WERE NOTED IN 47.5%, AND 40% HAD  
TRANSIENT LEUKOPENIA. EIGHT MEN FOLLOWED WITH  
DAILY ELECTROENCEPHALOGRAPHIC TRACINGS DEMONSTRATED  
NO SIGNIFICANT CHANGE SUBSEQUENT TO VACCINATION.  
THERE WAS NO CONSISTENT POSITIVE OR NEGATIVE  
CORRELATION BETWEEN ANY OF THESE RESPONSES OR  
COMBINATION OF RESPONSES. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-672 469 6/12 6/5  
CALIFORNIA UNIV OAKLAND NAVAL BIOLOGICAL LAB

THE PATHOGENICITY IN MICE OF AEROSOLS OF  
ENCEPHALOMYOCARDITIS GROUP VIRUSES OR THEIR  
INFECTIOUS NUCLEIC ACIDS,

(U)

68 8P AKERS, T. G. ; MADIN, S. H.  
; SCHAFER, F. L. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN JNL. OF IMMUNOLOGY, V100 N1  
P120-127 1968.

DESCRIPTORS: (•ENTEROVIRUSES, AEROSOLS),  
IMMUNITY, RIBONUCLEIC ACIDS, BIOLOGICAL ASSAY,  
HISTOLOGY, PATHOLOGY, MICE  
IDENTIFIERS: •ENCEPHALOMYOCARDITIS VIRUSES, MENO  
VIRUS

(U)

(U)

WHEN MICE WERE EXPOSED TO AEROSOLS OF DIFFERENT  
STRAINS OF THE ENCEPHALOMYOCARDITIS VIRUS GROUP OR  
MENO RNA, THE OBSERVED DIFFERENCES IN  
PATHOGENICITY WERE CORRELATED WITH PLAQUE SIZE, STATE  
OF THE VIRUS (INTACT OR RNA) AND THE PRESENCE OR  
ABSENCE OF CIRCULATING ANTIBODIES. WITH AEROSOLS  
OF MENO-27A, A SMALL PLAQUE-FORMING IMMUNOGENIC  
STRAIN, VIRUS WAS RECOVERED FROM THE LUNGS,  
INTESTINES, SPLEEN, LIVER AND BLOOD. PATHOLOGIC  
CHANGES OCCURRED IN THE LUNGS AND HEART. MICE  
EXPOSED TO LETHAL AEROSOLS OF MENO OR COL-SK  
(LARGE PLAQUE-FORMING STRAINS) YIELDED VIRUS FROM  
EVERY ORGAN. HOWEVER, WITH LETHAL MENO RNA  
AEROSOLS THERE WAS A DELAYED APPEARANCE OF VIRUS IN  
THE INTESTINAL TRACT. MICE EXPOSED TO LETHAL  
MENO RNA, COL-SK AND MENO VIRUS AEROSOLS  
EXHIBITED SIMILAR PATHOLOGIC CHANGES, WHICH OCCURRED  
ONLY IN BRAIN AND LIVER TISSUES. CHALLENGE WITH  
LETHAL COL-SK OR MENO AEROSOLS RESULTED IN NO  
DEATHS OF MENO-27A IMMUNIZED MICE. HOWEVER,  
CHALLENGE VIRUS WAS RECOVERED FROM THE LUNGS,  
INTESTINAL TRACT, SPLEEN, LIVER AND BLOOD.  
PATHOLOGIC CHANGES WERE ALSO OBSERVED IN LUNG AND  
LIVER TISSUES. RNA AEROSOL EXPOSURE OF MICE  
IMMUNIZED WITH MENO-27A RESULTED IN VIRUS BEING  
ISOLATED FROM LUNG TISSUE ONLY. (AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-673 207 6/5  
ARMY BIOLOGICAL LABS FREDERICK MD

THE CLINIC OF VENEZUELAN EQUINE ENCEPHALOMYELITIS IN  
MAN. (U)

JUL 68 12P ALEKSEEVA, A. A. ILEBEDEVA,  
N. V. DOUBNYAKOVA, N. M. ;  
REPT. NO. TRANS-422

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE; TRANS. OF ZHURNAL NEVROPATOLOGII I  
PSIKHIATRII (USSR) V59 N3 P212-220 1959.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, VIRUS DISEASES), EPIDEMIOLOGY, DIAGNOSIS,  
HEMATOLOGY, BLOOD COUNTS, ANTIBIOTICS,  
CHEMOTHERAPY, USSR (U)  
IDENTIFIERS: CLINICAL SYMPTOMS, TRANSLATIONS (U)

TWENTY-TWO VENEZUELAN EQUINE ENCEPHALOMYELITIS  
PATIENTS (TWENTY FEMALES AND TWO MALES) WERE  
EXAMINED. OF THESE, TWENTY WERE SITUATED IN THE  
CLINIC OF THE VIROLOGY INSTITUTE, AND TWO WERE  
EXAMINED AMBULATORILY. THE PATIENTS WERE OBSERVED  
BOTH IN THE ACUTE PERIOD OF THE DISEASE AND IN THE  
PERIOD OF CONVALESCENCE. FROM THE FIRST DAYS OF  
THE SICKNESS THE CLINICAL PICTURE CORRESPONDED TO  
THAT OF AN ACUTE NEUROINFECTION. SUBSEQUENTLY THE  
EPIDEMIOLOGICAL AND PARTICULARLY LABORATORY DATA  
CONFIRMED THE DIAGNOSIS; THE TYPE OF CAUSATIVE AGENT  
WAS ESTABLISHED. IN THE VIROLOGICAL INVESTIGATIONS  
THE VENEZUELAN ENCEPHALOMYELITIS VIRUS WAS ISOLATED  
FROM THE NASOPHARYNX WASHINGS OF FIVE OF THE  
PATIENTS; IN TWO IT WAS ISOLATED FROM THE BLOOD; AND  
IN ONE IT WAS ISOLATED FROM THE BLOOD AND FROM THE  
WASHING SIMULTANEOUSLY. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-677 210 6/12  
ARMY BIOLOGICAL LABS FREDERICK MD

THE UTILIZATION OF TISSUE CULTURES FOR PRODUCTION OF  
VACCINES AGAINST VENEZUELAN AND AMERICAN WESTERN  
EQUINE ENCEPHALOMYELITIS VIRUSES, (U)

JUL 68 14P KAVERIN, N. V. ;  
REPT. NO. TRANS-904

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF VOFROSY VIRUSOLOGII  
(USSR) V6 N2 P156-160 1961, BY ELDON E. EWING.

DESCRIPTORS: (EQUINE ENCEPHALOMYELITIS VIRUS,  
VACCINES), TISSUE CULTURE, ANTIGENS +  
ANTIBODIES, WESTERN EQUINE ENCEPHALOMYELITIS VIRUS,  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS, USSR (U)  
IDENTIFIERS: TRANSLATIONS (U)

THE AMERICAN WESTERN AND VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUSES ACCUMULATE IN CULTURAL  
FLUID IN HIGH TITERS; WITH THE USE OF A PROTEIN-FREE  
MEDIUM, HOWEVER, THE VIRAL TITER SOON DROPS SHARPLY.  
IT FOLLOWS, THEREFORE, TO USE A CULTURAL FLUID THAT  
HAS BEEN COLLECTED WITHIN 24 HOURS AFTER INOCULATION  
FOR THE PRODUCTION OF VACCINE. THE CULTURAL  
FORMALINIZED VACCINES AGAINST THE AMERICAN WESTERN  
AND VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUSES  
CAUSE THE APPEARANCE OF VIRUS-NEUTRALIZING ANTIBODIES  
IN THE SERA OF VACCINATED ANIMALS AND PROTECT MICE  
FROM THE DISEASE WHEN THEY ARE GIVEN AN  
INTRAPERITONEAL INJECTION OF UP TO 1,000,000 LD50  
OF THE VIRUS, THUS PROVING THEMSELVES TO BE HIGHLY  
IMMUNOGENIC PREPARATIONS. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-672 202 6/12  
ARMY BIOLOGICAL LABS FREDERICK MD

VIROLOGICAL STUDY OF LABORATORY INFECTIONS WITH  
VENEZUELAN EQUINE ENCEPHALOMYELITIS,

(U)

JUL 68 9P SHUBLADZE, A. K. ;  
GAIDAMOVICH, S. YA. ; GAVRILOV, V. I. ;  
REPT. NO. TRANS-404

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF VOPROSY VIRUSOLOGII  
(USSR) V4 N2 P208-210 1959.

DESCRIPTORS: (•) VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, INFECTIONS, SERODIAGNOSIS, TISSUE  
CULTURE, IMMUNE SERUMS, ANTIGENS + ANTIBODIES,  
MEDICAL TECHNICIANS, USSR  
IDENTIFIERS: TRANSLATIONS

(U)

(U)

VIROLOGICAL AND SEROLOGICAL EXAMINATIONS WERE  
CONDUCTED ON 62 PEOPLE, THE PATIENTS WITH  
VENEZUELAN EQUINE ENCEPHALOMYELITIS, THE PERSONS  
WHO HAD BEEN IN CONTACT WITH THE PATIENTS, AND THOSE  
HAVING WORKED WITH THE INDICATED VIRUS. THIRTY-SIX  
PERSONS WERE EXAMINED BY SEROLOGICAL AND VIROLOGICAL  
METHODS, AND 27 WERE EXAMINED BY SEROLOGICAL METHODS  
ALONE. ISOLATION OF THE VIRUS WAS CONDUCTED ON  
WHITE MICE AND CHICK EMBRYOS. FROM THE 26 PERSONS  
87 DIFFERENT SAMPLES OF BLOOD, MOUTH WASHINGS, URINE  
AND FECES WERE EXAMINED FOR THE VIRUS. THE VIRUS  
WAS DETECTED IN EIGHT PATIENTS ON THE 2-6TH DAY OF  
THE DISEASE. THREE STRAINS WERE ISOLATED FROM THE  
BLOOD, AND SIX STRAINS FROM THE MOUTH WASHINGS. IN  
THE NEUTRALIZATION TEST 99 BLOOD SERA, TAKEN FROM 62  
PERSONS, WERE EXAMINED. THE BLOOD SERA FROM THE  
CONVALESCENTS WERE INVESTIGATED DYNAMICALLY 2-3  
TIMES. ANTIBODIES TO THE VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS WERE OBSERVED IN TWENTY  
PERSONS, WITH WHICH ALL OF THEM ENDURED THE DISEASE.  
THERE WERE NO CASES OBSERVED OF AN ASYMPTOMATIC  
COURSE OF THE INFECTION IN THOSE PERSONS HAVING HAD  
CONTACT WITH THE PATIENTS, OR IN THOSE HAVING WORKED  
WITH THE VIRUS. ANTIBODIES WERE DETECTED IN THE  
CONVALESCENTS IN A SUFFICIENTLY HIGH TITER BY THE 10-  
12TH DAY OF THE ILLNESS. AS A RESULT OF COMPLEX  
VIROLOGICAL AND SEROLOGICAL INVESTIGATIONS A  
DIAGNOSIS OF VENEZUELAN ENCEPHALITIS WAS CONFIRMED  
IN TWENTY PERSONS. (AUTHOR)

(U)



UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMSI

AD-477 308 6/8 6/12  
ARMY BIOLOGICAL LABS FREDERICK MD

EPIDEMIOLOGICAL STUDY OF A LABORATORY INFECTION WITH  
THE VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS, (U)

JUL 68 7P SLEPUSHKIN, A. N. I  
REPT. NO. TRANS-407

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF VOPROSY VIRUSOLOGII  
(USSR) V4 N3 P211-214 1959.

DESCRIPTORS: (•VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, INFECTIONS), EPIDEMIOLOGY, MEDICAL  
TECHNICIANS, VIRUS DISEASES, ACCIDENTS, BIOLOGICAL  
LABORATORIES, USSR (U)  
IDENTIFIERS: TRANSLATIONS (U)

THE RESULTS OF AN ACCIDENT WHICH CAUSED THE  
SICKNESS OF MORE THAN TWENTY LABORATORY WORKERS WAS  
INVESTIGATED. AS A RESULT OF THE CARELESSNESS OF A  
LABORATORY WORKER, NINE AMPOULES CONTAINING 0.5  
MILLILITER EACH OF A FIVE-PER CENT BRAIN SUSPENSION  
FROM MICE INFECTED WITH THE VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS WERE BROKEN. (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-675 574 6/18  
FORT DETRICK FREDERICK MD

ANTIBODY RESPONSES IN RHESUS MONKEYS EXPOSED TO  
WHOLE-BODY X-IRRADIATION,

(U)

DEC 67 7P REYNOLDS, SCOTT L. ; CRAIG,  
CHARLES P. ; WHITFORD, HOWARD W. ; AIRHART, JIM ;  
STAAB, EDWARD V. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN RADIATION RESEARCH, V25 N2  
P451-457 AUG 68.

DESCRIPTORS: (•ANTIGENS + ANTIBODIES, RADIATION  
EFFECTS), MONKEYS, AGGLUTININS, INHIBITION,  
RADIOLOGICAL DOSAGE, VACCINES, IMMUNITY, WHOLE  
BODY IRRADIATION, VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, BLOOD SERUM

(U)

NEUTRALIZING AND HI ANTIBODIES WERE MEASURED IN  
CONTROL AND SHORT-TERM NEAR-LETHALLY IRRADIATED  
RHESUS MONKEYS VACCINATED WITH ATTENUATED VEE VIRUS  
VACCINE. SIGNIFICANTLY LOWER HI ANTIBODY TITERS  
IN IRRADIATED ANIMALS WERE OBSERVED 14 AND 21 DAYS  
AFTER VACCINATION, AS COMPARED TO THOSE IN THE  
NONIRRADIATED CONTROLS. NEUTRALIZING ANTIBODY  
TITERS WERE LOWER AT 14 DAYS BUT BY DAY 28 HAD  
ATTAINED LEVELS COMPARABLE TO CONTROL VALUES. NO  
DIFFERENCE WAS MEASURED IN HI ANTIBODY TITERS  
BETWEEN IRRADIATED AND NONIRRADIATED CONTROLS BY DAY  
42. (AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-675 1:2 6/15  
ARMY BIOLOGICAL LABS FREDERICK MD

NEUTRALIZATION REACTION OF THE VENEZUELAN  
ENCEPHALOMYELITIS VIRUS BASED ON THE HEMAGGLUTINATION  
PHENOMENON, (U)

DEC 66 8P GAIDAMOVICH, S. YA. ;  
VAGZHANOVA, V. A. ;  
REPT. NO. TRANS-2224

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF VOPROSY VIRUSOLOGII  
(USSR) VI NO P271-274 1986, BY CHARLES T. OSTFRTAG,  
JR.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, ANTIGEN-ANTIBODY REACTIONS),  
NEUTRALIZATION, IMMUNE SERUMS, TISSUE CULTURE,  
SERODIAGNOSIS, USSR  
IDENTIFIERS: TRANSLATIONS (U)  
(U)

THE NEUTRALIZATION REACTION OF THE VENEZUELAN  
EQUINE ENCEPHALOMYELITIS VIRUS IN TISSUE CULTURES,  
BASED ON THE PHENOMENON OF HEMAGGLUTINATION, MAKES IT  
POSSIBLE TO OBTAIN RESULTS IN 18 HOURS INSTEAD OF THE  
72 HOURS REQUIRED FOR AN EVALUATION BASED ON THE  
CYTOPATHOLOGICAL EFFECT. WHEN INVESTIGATING THE  
SERA OF CONVALESCENTS IN THE NEUTRALIZATION REACTION  
IN TISSUE CULTURES, PRACTICALLY THE SAME RESULTS ARE  
OBTAINED DURING EVALUATION BY BOTH METHODS. THE  
IMMUNE SERA OF RABBITS GAVE SIGNIFICANTLY HIGHER  
NEUTRALIZATION INDICES WHEN EVALUATED ACCORDING TO  
HEMAGGLUTINATION, COMPLEMENT-FIXING ANTIBODIES IN  
TITERS OF 1:8--1:16 WERE STILL DETECTED IN THE  
SERA OF CONVALESCENTS 8 YEARS FOLLOWING ILLNESS.  
(AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-682 584 2/4  
ARMY BIOLOGICAL LABS FREDERICK MD

INFECTIOUS ENCEPHALOMYELITIS, (U)

JUL 68 47P LEKAREVA, V. M. ;  
REPT. NO. TRANS-421

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: EXTRACT TRANS. OF MONO. INFECTIOUS  
AND INVASIVE DISEASES OF HORSES, MOSCOW, 1954 P269-  
290.

DESCRIPTORS: (\*ARBOVIRUSES, DISEASES),  
(\*DISEASES, EQUINES), INFECTIONS, CENTRAL  
NERVOUS SYSTEM, ETIOLOGY, PATHOLOGY,  
CELLS(BIOLOGY), CELL STRUCTURE, HISTOLOGY,  
EPIDEMIOLOGY, MORTALITY RATES, THERAPY,  
VACCINES, USSR (U)  
IDENTIFIERS: ENCEPHALOMYELITIS, TRANSLATIONS (U)

INFECTIOUS ENCEPHALOMYELITIS (IEM) OF HORSES IS  
AN ACUTE INFECTIOUS DISEASE. IT IS CAUSED BY A  
NEUROTROPIC FILTERABLE VIRUS AND IS ACCOMPANIED BY A  
DISRUPTION OF THE ACTIVITY OF THE NERVOUS SYSTEM,  
JAUNDICE OF THE MUCOUS MEMBRANES AND WITH A  
DISTINCTLY EXPRESSED PARESIS OF THE GASTRO-INTESTINAL  
TRACT. THIS ILLNESS IS OBSERVED AS AN ENZOOTIC OF  
SPORADIC CASES AND VERY SELDOM AS AN EPIZOOTIC.  
(AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-685 388 6/13 6/1  
ARMY BIOLOGICAL LABS FREDERICK MD

THE EFFECT OF INTERFERON ON THE INHIBITION OF  
SYNTHESIS OF PROTEINS IN A CULTURE OF CHICK EMBRYO  
FIBROBLASTS INOCULATED WITH ARBOR VIRUS, (U)

FEB 69 7P KAVERIN, N. V. ;  
REPT. NO. TRANS-229a

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF ANTIBIOTIKI (USSR) VII  
N1 P28-31 1966.

DESCRIPTORS: (\*ARBOVIRUSES, ANTIMETABOLITES),  
INHIBITION, BIOSYNTHESIS, PROTEINS,  
CELLS(BIOLOGY), INFECTIONS, VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS, USSR  
IDENTIFIERS: \*INTERFERON, TRANSLATIONS (U)  
(U)

IN CHICK EMBRYO FIBROBLASTS INFECTED WITH THE VIRUS  
OF VENEZUELAN EQUINE ENCEPHALITIS THE RATE OF  
PROTEIN SYNTHESIS FELL TO 20-25% OF THE INITIAL  
LEVEL WITHIN 3 HR AFTER INFECTION. IN CULTURES  
TREATED WITH HIGH CONCENTRATIONS OF INTERFERON A  
SUBSEQUENT INFECTION FAILED TO CAUSE A DECLINE OF  
PROTEIN SYNTHESIS NOT ONLY 3-4 BUT ALSO 24 HR AFTER  
INFECTION. THE CYTOPATHIC EFFECT EITHER DID NOT  
APPEAR OR ELSE (AT AN INFECTION DENSITY OF 500 PFU  
PER CELL) DEVELOPED ONLY TO A MINOR DEGREE.  
LOWER CONCENTRATIONS OF INTERFERON (22-100 UNITS  
PER ML) INHIBITED MULTIPLICATION OF THE VIRUS BUT  
DID NOT PREVENT THE DECLINE OF PROTEIN SYNTHESIS AND  
THE DEVELOPMENT OF THE CYTOPATHIC EFFECT.  
(AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-689 389 6/13  
ARMY BIOLOGICAL LABS FREDERICK MD

PRODUCTION OF INTERFERON BY SOME ARBOR VIRUSES OF  
GROUP A, (U)

FEB 69 IIP KRSHOV, F. I. ITAZULKHOVA,  
E. B. KRMOLEVA, Z. V. I  
REPT. NO. TRANS-2379

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF ANTIBIOTIKI (USSR) VII  
N1 P32-35 1966.

DESCRIPTORS: (•GROUP A ARBOVIRUSES, IMMUNITY),  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS, EASTERN  
EQUINE ENCEPHALOMYELITIS VIRUS, SEMI IKI VIRUS,  
INFECTIONS, VOLUMETRIC ANALYSIS, PROTEINS,  
CELLS(BIOLOGY), ANTIBIOTICS, EMBRYONATED EGG  
TECHNIQUE, USSR (U)  
IDENTIFIERS: •INTERFERON, TRANSLATIONS (U)

THE KEE, VEE AND SF VIRUSES RAPIDLY PRODUCED  
INTERFERON IN CHICK EMBRYO FIBROBLASTS. MAXIMAL  
TITERS OF INTERFERON IN THE CULTURE FLUID WERE  
OBTAINED BY USING THE METHOD OF DOUBLE INFECTION OF  
THE CELLS WITH THE PARTIALLY INACTIVATED FOLLOWED BY  
THE INTACT VIRUS. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-683 402 6/12  
ARMY BIOLOGICAL LABS FREDERICK MD

REPRODUCTION OF VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS IN CHICK EMBRYO FIBROBLAST SUSPENSIONS, (U)

69 11P NOVOKHATSKII, A. S. MISHIN,  
L. N. ;  
REPT. NO. TRANS-2412

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF VOPROSY VIRUSOLOGII  
(USSR) V12 N5 P566-574 1968.

DESCRIPTORS: (•VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, EMBRYONATED EGG TECHNIQUE),  
REPRODUCTION(PHYSIOLOGY), EFFECTIVENESS,  
INFECTIONS, CELLS(BIOLOGY),  
CONCENTRATION(CHEMISTRY), TRYPSIN, DESIGN,  
MORPHOLOGY(BIOLOGY), USSR (U)  
IDENTIFIERS: TRANSLATIONS (U)

THE UNIT FOR DEEP CULTIVATION CAN BE USED  
SUCCESSFULLY FOR THE MULTIPLICATION OF VIRUSES IN A  
SUSPENSION OF TRYPSINIZED CELLS. IT WAS  
DEMONSTRATED THAT THE EFFECTIVENESS OF REPRODUCTION  
OF VIRUS IS DETERMINED BY THE MULTIPLICITY OF  
INFECTION, CONCENTRATION OF CELLS IN THE SUSPENSION,  
AND THE REGIMEN OF AERATION. OPTIMUM TECHNOLOGICAL  
CONDITIONS HAVE BEEN DEVELOPED FOR THE ACCELERATED  
OBTAINING OF LARGE QUANTITIES OF A REPRESENTATIVE OF  
GROUP A ARBOVIRUSES - THE VEE VIRUS.  
(AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-686 35: 6/12 6/5  
FORT DETRICK FREDERICK MD

5-AZACYTIDINE AS A MUTAGEN FOR ARBOVIRUSES.

(U)

JUN 68 3P HALLE, SIDNEY ;

UNCLASSIFIED REPORT

AVAILABILITY: PUB. IN JNL. OF VIROLOGY, V2 N10  
P1228-1229 OCT 68.

DESCRIPTORS: (\*ARBOVIRUSES, \*MUTATIONS),  
(\*TRIAZINES, MUTATIONS), FURANS, VENEZUELAN  
EQUINE ENCEPHALOMYELITIS VIRUS, ESCHERICHIA COLI,  
NUCLEOSIDES

(U)

IDENTIFIERS: MUTAGENIC AGENTS, \*CYTIDINE/5-  
AZA

(U)

THIS REPORT DISCUSSES THE MUTAGENIC EFFECT OF 5-  
AZACYTIDINE ON ARBOVIRUSES ESPECIALLY VENEZUELAN  
EQUINE ENCEPHALOMYELITIS.

(U)



UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /Z1M51

AD-686 340 4/13  
FORT DETRICK FREDERICK MD

THE KINETICS OF NEUTRALIZATION OF VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS BY ANTISERUM AND THE  
REVERSIBILITY OF THE REACTION, (U)

JUL 68 12P HAHON, N. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN J. GEN. VIROL, V4 P77-88  
1969.

DESCRIPTORS: (+VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, NEUTRALIZATION), IMMUNE SERUMS, ANTIGENS  
+ ANTIBODIES, TEMPERATURE, DYNAMICS, PH,  
DISSOCIATION, CONCENTRATION(CHEMISTRY),  
CELLS(BIOLOGY) (U)

THE NEUTRALIZATION OF VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS FOLLOWED FIRST-ORDER  
KINETICS, WITH THE REACTION RATE DEPENDENT ON THE  
ANTIBODY CONCENTRATION AND THE REACTION TEMPERATURE  
BUT INDEPENDENT OF PH AND VIRUS CONCENTRATION  
WITHIN THE PRESCRIBED LIMITS. THE LINEAR  
RELATIONSHIP OBTAINED BETWEEN THE NEUTRALIZATION  
REACTION RATE CONSTANT (K) AND ANTISERUM DILUTION  
SHOWED THAT K INCREASED FIVEFOLD FOR EACH TENFOLD  
DILUTION OF ANTISERUM. THE ENERGY OF ACTIVATION,  
CALCULATED FROM AN ARRHENIUS PLOT OF THE DATA, WAS  
APPROXIMATELY 9000 CAL./MOLE OF VIRUS. EACH 10  
DEG. CHANGE IN TEMPERATURE (Q10) ALTERED THE K  
VALUE BY A FACTOR OF 1.7. IN THE PRESENCE OF  
EXCESS ANTIBODY, A SMALL FRACTION OF VIRUS RESISTED  
NEUTRALIZATION. NEUTRALIZED VIRUS COULD NOT BE  
APPRECIABLY REACTIVATED BY SIMPLE DILUTION UNDER  
PHYSIOLOGICAL CONDITIONS BUT WAS DISSOCIATED AT  
EITHER ACID OR ALKALINE PH VALUES. RE-  
NEUTRALIZATION OF VIRUS OCCURRED WHEN THE  
ENVIRONMENTAL MEDIUM WAS ADJUSTED TO NEUTRALITY,  
INDICATING THAT REACTIVATION WAS THE RESULT OF  
DISSOCIATION AND NOT DENATURATION. NEUTRALIZED  
VIRUS COULD BE ATTACHED TO CELL MONOLAYERS AND  
REACTIVATED TO AN INFECTIOUS STATE BY TREATMENT AT  
ACID PH. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-687 363 6/17  
FORT DETRICK FREDERICK MD

GROWTH OF VENEZUELAN, AND EASTERN, EQUINE  
ENCEPHALOMYELITIS VIRUSES IN TISSUE CULTURES OF  
MINCED AEDES AEGYPTI LARVAE, (U)

68 12P JOHNSON, JAMES W. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN AMERICAN JNL. OF TROPICAL  
MEDICINE AND HYGIENE, VOL 61 P102-114 JAN 69.

DESCRIPTORS: (•VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, TISSUE CULTURE), (•EASTERN EQUINE  
ENCEPHALOMYELITIS VIRUS, TISSUE CULTURE), GROUP  
A ARBOVIRUSES, GROWTH, AEDES, LARVAE,  
TEMPERATURE, PH, MORPHOLOGY(BIOLOGY),  
VIABILITY, ADSORPTION, CULTURE MEDIA (U)

A METHOD FOR THE GERM-FREE CULTIVATION OF THE  
MOSQUITOES AEDES AEGYPTI AND AEDES TRISERIATUS  
WAS DEVELOPED, AND PRIMARY TISSUE CULTURES WERE  
PREPARED FROM MINCED LARVAE OF BOTH INSECT SPECIES.  
THE TRINIDAD AND THE 9T STRAINS OF VENEZUELAN  
EQUINE ENCEPHALOMYELITIS (VEE) VIRUS AND THE  
LOUISIANA STRAIN OF EASTERN EQUINE  
ENCEPHALOMYELITIS (EEE) VIRUS WERE GROWN IN LARVAL  
TISSUE CULTURE OF A. AEGYPTI. THE TRINIDAD  
STRAIN OF VEE VIRUS WERE ALSO GROWN IN A.  
TRISERIATUS LARVAL TISSUE CULTURES. THE GROWTH OF  
VEE VIRUS IN A. AEGYPTI LARVAL TISSUE CULTURE WAS  
INFLUENCED BY THE LENGTH OF TIME, THE TEMPERATURE,  
AND THE VIRUS CONCENTRATION USED FOR THE ADSORPTION  
PROCESS, AND THE TEMPERATURE, PH, AND AGITATION OF  
CULTURES DURING GROWTH. IN THESE CULTURES, THE  
TRINIDAD STRAIN GREW SOMEWHAT BETTER THAN THE 9T  
STRAIN; ITS LATENT PERIOD WAS SHORTER, ITS GROWTH  
RATE WAS FASTER, AND IT REACHED HIGHER MAXIMUM TITERS  
OF VIRUS. HOWEVER, EEE VIRUS WAS SUPERIOR TO THE  
TRINIDAD STRAIN IN EACH OF THESE CHARACTERISTICS OF  
GROWTH. SOME EVIDENCE SUGGESTED THAT A VIRUS-  
INACTIVATING MATERIAL WAS PRESENT IN LARVAL TISSUE  
CULTURES OF BOTH SPECIES OF MOSQUITO. TEN SERIAL  
PASSAGES OF THE TRINIDAD STRAIN OR FIVE SERIAL  
PASSAGES OF THE 9T STRAIN IN A. AEGYPTI LARVAL  
TISSUE CULTURES CAUSED NO DETECTABLE CHANGES IN  
EITHER THE VIRULENCE FOR MICE OR THE DISTRIBUTION OF  
PLAQUE SIZE OF THESE VIRUS STRAINS. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-689 891 6/12  
ARMY MEDICAL UNIT FREDERICK MD

ALTERATIONS IN IMMUNE RESPONSES BY ATTENUATED  
VENEZUELAN EQUINE ENCEPHALITIS VACCINE. I.  
ADJUVANT EFFECT OF VEE VIRUS INFECTION IN GUINEA  
PIGS, (U)

NOV 68 9P CRAIG, CHARLES P. REYNOLDS,  
SCOTT L. FAIRHART, JIM W. ISTAAB, EDWARD V. I

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN JNL. OF IMMUNOLOGY, V102 N5  
P1220-1227 1969.  
SUPPLEMENTARY NOTE: SEE ALSO AD-689 892.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, VACCINES), INFECTIONS, RESPONSES, GAMMA  
GLOBULIN, ANTIGENS + ANTIBODIES, IMMUNITY,  
ATTENUATION, VOLUMETRIC ANALYSIS, GUINEA PIGS (U)

ATTENUATED VENEZUELAN EQUINE ENCEPHALITIS VIRUS  
VACCINE INFECTION ENHANCED THE IMMUNE RESPONSE IN  
HARTLEY STRAIN GUINEA PIGS. ACCELERATED IMMUNE  
CLEARANCE OF 1 OR 20 MG 1291-BOVINE GAMMA GLOBULIN  
INJECTED 24 OR 48 HR BEFORE OR 24 HR AFTER VEE  
VACCINE WAS DEMONSTRATED. ELEVATED  
HEMAGGLUTININATING TITERS TO BGG WERE OBTAINED ON  
DAYS 8, 12, 21, 28 AND 35 WHEN THE VEE VACCINE  
PRECEDED BGG BY 24 HR AND ON DAYS 8 AND 12 WHEN  
VEE FOLLOWED BGG BY 24 OR 48 HR. INCREASED  
TITERS WERE DEMONSTRATED ONLY AT 8 DAYS IN GUINEA  
PIGS INFECTED 9 TO 20 MIN OR 48 HR BEFORE BGG.  
ALL THE HA ANTIBODY ACTIVITY IN THE SERA  
COLLECTED ON THE 4TH DAY WAS 2-MERCAPTOETHANOL (2-  
ME) REDUCIBLE. A SIGNIFICANT PORTION OF THE HA  
ANTIBODY AT 8 AND 12 DAYS WAS 2-ME RESISTANT.  
NONINFECTIVE FORMALIN-KILLED ATTENUATED VEE VIRUS  
DID NOT PRODUCE AN INCREASE IN THE HA TITERS.  
(AUTHOR) (U)

UNCLASSIFIED

DOC REPORT AIRCIBRARY SEARCH CONTROL NO. /ZIMS1

AD-684 892 6712  
FORT DETRICK FREDERICK MD

ALTERATIONS IN IMMUNE RESPONSES BY ATTENUATED  
VENEZUELAN EQUINE ENCEPHALITIS VACCINE. II.  
PATHOLOGY AND SOLUBLE ANTIGEN LOCALIZATION IN GUINEA  
PIGS. (U)

NOV 68 8P AIRHART, JIM W. ; TREVINO,  
GILBERTO S. ; CRAIG, CHARLES P. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN JNL. OF IMMUNOLOGY, V102 N5  
P1228-1224 1969.  
SUPPLEMENTARY NOTE: SEE ALSO AD-689 891.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, VACCINES), ATTENUATION, INFECTIONS,  
VISUAL INSPECTION, FLUORESCENT ANTIBODY TECHNIQUES,  
LIVER, SPLEEN, KIDNEYS, LYMPHATIC SYSTEM,  
GAMMA GLOBULIN, LEUKOCYTES, PATHOLOGY (U)

THE PATHOLOGY OF INFECTION WITH ATTENUATED  
VENEZUELAN EQUINE ENCEPHALITIS VACCINE, 83RD TISSUE  
CULTURE PASSAGE, IN GUINEA PIGS WAS STUDIED BY  
ROUTINE MICROSCOPIC EXAMINATION OF TISSUES AND  
FLUORESCENT ANTIBODY STAINING FOR VIRAL ANTIGEN.  
TRANSIENT CENTRILOBULAR HEPATIC DEGENERATION,  
ARTERIOLAR ENDOTHELIAL SWELLING, AND SPLENIC AND  
LYMPH NODE GERMINAL CENTER PROLIFERATION, CHIEFLY OF  
RETICULOENDOTHELIAL ELEMENTS BUT ALSO OF IMMATURE  
LYMPHOBLASTS, WERE DEMONSTRATED. CIRCULATING  
LYMPHOPENIA AND LEUKOPENIA, FOLLOWED BY  
LYMPHOCYTOSIS, ALSO OCCURRED. TWO PEAKS OF VIRAL  
ANTIGEN CONCENTRATIONS WERE FOUND IN LIVER, SPLEEN,  
LYMPH NODES AND KIDNEY, THE FIRST IMMEDIATELY AFTER  
INFECTION, THE SECOND BETWEEN DAYS 7 AND 15. NO  
DIFFERENCES WERE FOUND IN ORGAN LOCALIZATION OR  
PERSISTENCE OF FLUORESCENT BOVINE GAMMA GLOBULIN  
GIVEN 24 HR AFTER VEE. THE SIGNIFICANCE AND  
IMPLICATIONS OF THE FINDINGS TO THE ADJUVANT EFFECT  
OF VEE VIRUS INFECTION WERE DISCUSSED.  
(AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /Z1M51

AD-692 946 A/13  
FORT DETRICK FREDERICK MD

NONVIABLE VENEZUELAN EQUINE ENCEPHALOMYELITIS  
HEMAGGLUTININ PREPARED FROM TISSUE CULTURES BY GAMMA  
RADIATION. (U)

MAY 69 3P REITHAN, MORTON ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN APPLIED MICROBIOLOGY, V18 N2  
P276-279 AUG 69.

DESCRIPTORS: (•VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, AGGLUTININS), (•AGGLUTININS,  
PREPARATION), TISSUE CULTURE, EXPOSURE, GAMMA  
RAYS, SERODIAGNOSIS, RADIATION EFFECTS (U)

HEMAGGLUTININS OF VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS WERE PRODUCED IN TISSUE  
CULTURES, AND THE INFECTIVE VIRUS WAS RENDERED  
NONVIABLE BY EXPOSURE TO GAMMA RADIATION.  
(AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-697 260 6/12  
FORT DETRICK FREDERICK MD

FACTORS INFLUENCING VIRULENCE AND PLAQUE PROPERTIES  
OF ATTENUATED VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS POPULATIONS. (U)

JUL 69 3P HEARN, HENRY J. ; SELIOKAS,  
ZENONAS V. ; ANDERSEN, ARTHUR A. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN JNL. OF VIROLOGY, V4 N4  
P545-546 OCT 69.

DESCRIPTORS: (\*VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, ATTENUATION), (\*VIABILITY, VENEZUELAN  
EQUINE ENCEPHALOMYELITIS VIRUS), STORAGE,  
STABILITY, IMMUNITY (U)  
IDENTIFIERS: \*PLAQUES (MICROBIOLOGY) (U)

A MINORITY OF STABLE LARGE-PLAQUE VIRUS INCREASED  
PROPORTIONALLY IN STORED UNSTABLE ATTENUATED (9T)  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS  
POPULATIONS. L-CELL-GROWN PROGENY (9T2) OF  
STORED 9T SHOWED LARGE AMOUNTS OF LARGE-PLAQUE VIRUS  
AND INCREASED VIRULENCE. SMALL-PLAQUE VIRUS  
INHIBITED LARGE-PLAQUE VIRUS BUT NOT THE REVERSE.  
SERIAL PASSAGE OF SMALL-PLAQUE VIRUS FROM 9T2  
YIELDED A STRAIN (20T) THAT WAS MORE ATTENUATED  
THAN 9T. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-701 24: 6/12  
FORT DETRICK FREDERICK MD

GROWTH OF VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS  
IN HUMAN DIPLOID CELL STRAIN WI-28, (U)

OCT 69 4P REITHAN, MORTON GREEN,  
LEONARD I

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN APPLIED MICROBIOLOGY, V19  
N1 P196-198 JAN 70.

DESCRIPTORS: 1. VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, 2. TISSUE CULTURE CELLS, GROWTH,  
ARBOVIRUSES, CULTURE MEDIA, VACCINES (U)  
IDENTIFIERS: HUMAN DIPLOID CELL STRAIN WI28 (U)

IT WAS DEMONSTRATED THAT VENEZUELAN EQUINE  
ENCEPHALOMYELITIS (VEE) VIRUS REPLICATED IN AND  
ADAPTED RAPIDLY TO HUMAN DIPLOID CELL STRAIN WI-28.  
PEAK TITERS OF APPROXIMATELY  $10^8$  TO THE  $9.8$ TH POWER  
HOUSE INTRACEREBRAL 50% LETHAL DOSES WERE OBTAINED  
AT LOW PASSAGE LEVELS IN EAGLES BASAL MEDIUM  
SUPPLEMENTED WITH CALF SERUM. VEE VIRUS REPLICATED  
POORLY IN SERUM-FREE MEDIUM. PROPAGATION OF VEE  
VIRUS WAS ACCOMPANIED BY THE PRODUCTION OF  
HEMAGGLUTININ AND CYTOPATHOGENIC EFFECTS.  
(AUTHOR) (U)

UNCLASSIFIED

DOC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-705 729 6/13  
FORT DETRICK FREDERICK MD

NEUTRALIZATION OF RESIDUAL INFECTIVITY OF VENEZUELAN  
EQUINE ENCEPHALOMYELITIS VIRUS BY ANTI-GAMMA  
GLOBULIN, (U)

OCT 69 12P HAHON, N. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN JNL. OF GENERAL  
VIROLOGY, V6 P261-372 1970.

DESCRIPTORS: (\*VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, NEUTRALIZATION), (\*GAMMA GLOBULIN,  
\*ANTIGENS + ANTIBODIES), ARBOVIRUSES, VIRUSES,  
ANTIGEN-ANTIBODY REACTIONS, IMMUNOLOGY, IMMUNE  
SERUMS (U)

RESIDUAL INFECTIVITY DETECTED AFTER THE INTERACTION  
OF VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS WITH  
SPECIFIC ANTISERUM WAS CAUSED MAINLY BY THE FORMATION  
OF INFECTIVE VIRUS + ANTIBODY COMPLEXES  
(SENSITIZED VIRUS) THAT COULD BE NEUTRALIZED BY  
SERUM CONTAINING ANTIGAMMA GLOBULIN (IGG). THE  
QUANTITIES OF VIRUS SENSITIZED BY ANTISERUM TO  
VENEZUELAN EQUINE ENCEPHALOMYELITIS AND NEUTRALIZED  
BY ANTI-IGG SERUM DEPENDED ON THE ANTIBODY  
CONCENTRATIONS OF THESE SERA. IN CONTRAST TO THE  
MARKED TEMPERATURE AND TIME-DEPENDENCE OF  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS  
NEUTRALIZATION BY ANTISERUM, NEUTRALIZATION OF  
SENSITIZED VIRUS BY ANTI-IGG SERUM WAS MORE  
RAPID, BEING ALMOST COMPLETE WITHIN 1 MIN. AT 25  
DEGREES, AND LESS SENSITIVE TO TEMPERATURE. VIRUS  
SENSITIZATION PRECEDED NEUTRALIZATION AND INDICATED  
THAT INFECTIVE VIRUS + ANTIBODY COMPLEXES WERE  
FORMED BEFORE VIRUS NEUTRALIZATION BEGAN. THE  
NEUTRALIZATION OF SENSITIZED VIRUS BY ANTI-IGG  
SERUM WAS GENERALLY SPECIES SPECIFIC. DIFFERENCES  
IN THE ABILITY OF ANTI-IGG, ANTI-IGA, AND  
ANTI-IGM SERA TO NEUTRALIZE SENSITIZED VIRUS  
INDICATED THAT THE REACTION WAS ALSO INFLUENCED BY  
THE CLASS SPECIFICITY OF THE ANTI-IMMUNOGLOBULIN.  
SENSITIZED VIRUS WAS PARTIALLY NEUTRALIZED BY GOAT  
ANTISERUM TO MONOVALENT FAB FRAGMENTS OF HUMAN  
IGG AND, TO A LESSER DEGREE, BY THE FC  
FRAGMENT. SENSITIZED VIRUS WAS NEUTRALIZED BY AN IN  
VITRO MIXTURE OF THESE FRAGMENTS TO ALMOST THE SAME  
DEGREE AS BY GOAT ANTISERUM TO INTACT HUMAN IGG.  
THE FC FRAGMENT MAY, THEREFORE, BE INVOLVED IN  
VIRUS NEUTRALIZATION. (AUTHOR) (U)

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/ZIM51



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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-705 768 5/12  
FORT DETRICK FREDERICK MD

NEUTRALIZATION ANTI-IGG TEST FOR ANTISERA TO  
VENEZUELAN EQUINE ENCEPHALOMYELITIS,

(U)

OCT 69 7P HAHON, N. J

UNCLASSIFIED REPORT

AVAILABILITY: PUB. IN JNL. OF GENERAL  
VIROLOGY, V6 P285-291 1970.

SUPPLEMENTARY NOTE: REVISION OF REPORT DATED 14 JUL  
69.

DESCRIPTORS: (\*VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, \*ANTIGENS + ANTIBODIES), (\*SERODIAGNOSIS,  
ANTIGENS + ANTIBODIES), NEUTRALIZATION,  
ANTIGEN-ANTIBODY REACTIONS, IMMUNE SERUMS, GAMMA  
GLOBULIN, ARBOVIRUSES, VIRUSES

(U)

A PRECISE, REPRODUCIBLE, AND SENSITIVE SERUM  
NEUTRALIZATION TEST WAS DEVELOPED TO ESTIMATE  
VENEZUELAN EQUINE ENCEPHALOMYELITIS NEUTRALIZING  
ANTIBODY ACTIVITY WITHIN 24 HR. THE TEST DEPENDS ON  
THE INTERACTIONS OF VIRUS WITH ANTIVIRAL GLOBULINS  
AND OF THE RESULTANT COMPLEXES WITH ANTI-GAMMA  
GLOBULIN (IGG) ANTIBODIES. THE 50% SERUM  
NEUTRALIZING DILUTIONS WERE CALCULATED FROM THE  
REDUCTION OF FLUORESCENT CELLS IN MCCOY CELL  
MONOLAYERS RESULTING FROM THE NEUTRALIZATION OF  
INFECTIVE VIRUS BY ANTIBODY. IN COMPARATIVE  
ESTIMATES OF THE NEUTRALIZING ACTIVITY OF HUMAN AND  
MONKEY ANTISERA, THE SENSITIVITY OF THE SERUM  
NEUTRALIZATION ANTI-IGG TEST WAS SEVERAL  
HUNDREDFOLD GREATER THAN THAT OF THE CONVENTIONAL  
SERUM NEUTRALIZATION TEST IN MICE. (AUTHOR)

(U)

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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-706 553 6/13  
FORT DETRICK FREDERICK MD

COMPARATIVE STUDY OF THE HAEMAGGLUTINATING  
ARBOVIRUS ANTIGENS PREPARED FROM TISSUE CULTURES  
AND MOUSE BRAIN (SRAVNITELNOE IZUCHENIE  
GEMAGGLYUTINIRUYUSHCHIKH ARBOVIRUSNYKH  
ANTIGENOV, PRIGOTOVLENNYKH IZ TRANEVYKH  
KULTUR I IZ MOZGA MYSHEI).

(U)

APR 70 IIP GAIDAMOVICH, S. YA. ICASALS,  
J. I  
REPT. NO. TRANS-2701

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF VOPROSY VIRUSOLOGII  
(USSR) V13 N2 P228-242 1968.

DESCRIPTORS: (\*ARBOVIRUSES, AGGLUTININS),  
(\*AGGLUTININS, PREPARATION), ANTIGENS +  
ANTIBODIES, SERODIAGNOSIS, INFECTIONS, IMMUNITY,  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS, WESTERN  
EQUINE ENCEPHALOMYELITIS VIRUS, CHIKUNGUNYA VIRUS,  
TISSUE CULTURE, MICE, BRAIN, USSR  
IDENTIFIERS: TRANSLATIONS

(U)

(U)

THE LABORATORY DIAGNOSIS OF THE ARBOVIRUS  
INFECTIONS AND THE INVESTIGATION OF THE IMMUNITY  
STRUCTURE OF THE POPULATION ARE RESTRICTED TO A LARGE  
EXTENT BY THE LACK OF A SUFFICIENT SET OF NON-  
INFECTIOUS ANTIGENS FOR THE HAI AND HA TESTS.  
UP TO NOW THE MOST WIDELY USED METHOD OF PRODUCING  
THE ARBOVIRUS ANTIGENS IS THAT FROM MOUSE BRAIN BY  
THE METHOD OF THE AQUEOUS-SALINE OR SUCROSE-ACETONE  
EXTRACTION, WITH THE DEVELOPMENT OF THE METHOD OF  
GROWING ARBOVIRUSES IN TISSUE CULTURES IT BECAME  
POSSIBLE TO OBTAIN FROM THIS MATERIAL THE ANTIGENS  
FOR HAI AND HA TESTS. THE PURPOSE OF THE  
RESEARCH IS THE INVESTIGATION OF THE SPECIFICITY AND  
OF THE ACTIVITY SPECTRUM AT VARIOUS PH AND  
TEMPERATURE VALUES OF THE NON-INFECTIOUS ANTIGENS FOR  
THE VIRUSES OF THE VENEZUELAN (VEL), AND  
WESTERN (ZEL) EQUINE ENCEPHALOMYELITIS AND OF  
CHIKUNGUNYA IN THE HAI TEST. (AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-709 942 6/17 6/1  
FORT DETRICK FREDERICK MD

VIRUS-SPECIFIC POLYSOMES IN CELLS INFECTED WITH  
THE VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS, (U)

JUL 70 9P ERSHOV, F. I. IZH DANOV, V.  
M. IURYVAEV, L. V. I  
REPT. NO. TRANS-2723

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF UNIDENTIFIED RUSSIAN  
LANGUAGE ARTICLE.

DESCRIPTORS: (•VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, •RIBOSOMES), (•TISSUE CULTURE CELLS,  
RIBOSOMES), GROWTH, INFECTIONS, RIBONUCLEIC  
ACIDS, ARBOVIRUSES, VIRUSES, NUCLEIC ACIDS,  
BIOSYNTHESIS, REPRODUCTION (PHYSIOLOGY), USSR,  
MOLECULAR STRUCTURE (U)  
IDENTIFIERS: TRANSLATIONS (U)

THE USE OF A DOUBLE ISOTOPIC TAG IS A CONVENIENT  
METHODOLOGICAL TECHNIQUE WHICH PERMITS SIMULTANEOUS  
DETERMINATION OF THE STRUCTURAL STATE AND THE  
FUNCTIONAL ACTIVITY OF THE POLYSOMES. STUDY OF THE  
DYNAMICS OF POLYSOME FORMATION IN THE CASE OF  
ARBOVIRUS INFECTION TESTIFIES TO THE FACT THAT THIS  
PROCESS IS CLOSELY CORRELATED WITH THE VIRUS  
REPRODUCTION CYCLE. IN THE CASE OF INFECTION BY THE  
VEE VIRUS, THE MAXIMUM OF THE FORMATION OF ACTIVELY  
FUNCTIONING VIRUS-SPECIFIC POLYSOMES IS NOTED BETWEEN  
THE 3-RD AND THE 4-TH HOUR AFTER INFECTION, I.E., AT  
THE HEIGHT OF THE INFECTION. OF THE 2 TYPES OF  
VIRUS-SPECIFIC POLYSOMES THE GREATEST INTEREST IS  
AFFORDED BY 'HEAVY' POLYSOMES, WHICH HAVE A  
SEDIMENTATION CONSTANT OF 250 S AND HIGHER. THEY  
ARE, APPARENTLY, THE MAIN STRUCTURE ON THE BASIS OF  
WHICH THE SYNTHESIS OF VIRUS PROTEINS IS EFFECTED.  
A SPECIAL COMMUNICATION WILL BE DEVOTED TO A  
DETAILED ANALYSIS OF THE STATE AND FUNCTIONING OF  
VIRUS-SPECIFIC POLYSOMES OF THIS TYPE. THE  
PRESENCE, ON THE POLYSOMES, OF AN RNA WHICH IN ITS  
PROPERTIES IS ANALOGOUS TO THAT OF THE VIRI,  
APPARENTLY TESTIFIES TO ITS INFORMATION FUNCTIONS.  
(AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMSI

AD-712 680 6/16  
ARMY MEDICAL RESEARCH INST OF INFECTIOUS DISEASES  
FREDERICK MD

THE EFFECT OF LIVE ATTENUATED VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS VACCINE ON SERUM IRON,  
ZINC, AND COPPER CONCENTRATIONS IN MAN, (U)

OCT 69 IIP PEKAREK, ROBERT S. BURGHEN,  
GEORGE A. BARTELLONI, PETER J. SCALIA, FRANK  
M. BOSTIAN, KAREN A. J

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN THE JNL. OF LABORATORY  
AND CLINICAL MEDICINE, ST. LOUIS, V76 N2 P293-303  
AUG 70.

DESCRIPTORS: (+INFECTIOUS DISEASES, +METABOLISM),  
(+METALS, METABOLISM), (+VACCINES, +VENEZUELAN  
EQUINE ENCEPHALOMYELITIS VIRUS), BLOOD SERUM,  
RESPONSES, MICROORGANISMS, COPPER, ZINC, IRON,  
FEVERS (U)

SERUM IRON AND ZINC CONCENTRATIONS FELL EARLY AFTER  
EXPOSURE OF VOLUNTEERS TO LIVE ATTENUATED  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS VACCINE,  
WITH A RISE IN SERUM COPPER CONCENTRATIONS.  
ALTERATIONS IN THESE SERUM METAL CONCENTRATIONS  
WERE SIGNIFICANTLY DIFFERENT FROM CHANGES EXPECTED ON  
THE BASIS OF DAY-TO-DAY VARIABILITY DIFFERENCES AMONG  
INDIVIDUALS. THE PROSPECTIVE NATURE OF THIS STUDY  
AND THE RAPID DEVELOPMENT OF ALTERED SERUM METAL  
METABOLISM, EVEN IN EXPOSED SUBJECTS WHO REMAINED  
ASYMPTOMATIC, SUGGEST THAT THE CHANGES IN THESE  
METALS IN THE PRODROMAL PERIOD REPRESENT AN EARLY  
HOST RESPONSE TO THE PRESENCE OF INVADING  
MICROORGANISMS. IN THOSE SUBJECTS WHO DEVELOPED  
FEBRILE ILLNESS, THE RESPONSES BECAME EXAGGERATED AND  
APPEARED TO BE RELATED IN TIMING AND MAGNITUDE TO THE  
ONSET AND SEVERITY OF THE FEBRILE REACTION. THESE  
CHANGES MAY HAVE SIGNIFICANCE IN PROVIDING NEW  
APPROACHES TO DIAGNOSIS AND TO AN IMPROVED  
UNDERSTANDING OF HOST METABOLIC RESPONSES DURING  
INFECTIOUS ILLNESS. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-715 201 6/13  
FORT DETRICK FREDERICK MD

MULTIPLE ASSESSMENT AND SERUM NEUTRALIZATION  
OF ARBOVIRUS MIXTURES,

(U)

AUG 70 2P HAHON, NICHOLAS (MAYHEW,  
CHARLES J. )

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN APPLIED MICROBIOLOGY, V20  
N4 P652-654 OCT 70.

DESCRIPTORS: (•ARBOVIRUSES, FLUORESCENT ANTIBODY  
TECHNIQUES), (•SERODIAGNOSIS, ARBOVIRUSES),  
TEST METHODS, QUANTITATIVE ANALYSIS, VIRUSES,  
ANTIGENS + ANTIBODIES, VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS, RIFT VALLEY FEVER VIRUS,  
CHIKUNGUNYA VIRUS

(U)

MIXTURES OF VENEZUELAN EQUINE ENCEPHALOMYELITIS,  
RIFT VALLEY FEVER, AND CHIKUNGUNYA VIRUSES MAY BE  
ASSAYED BY SELECTIVE IMMUNOFLOURESCENCE STAINING OF  
INFECTED CELL MONOLAYERS. A MULTIPLE SERUM  
NEUTRALIZATION TEST IS DESCRIBED FOR QUANTIFYING  
REACTIONS OF THESE VIRUSES WITH MIXTURES OF SERUM  
ANTIBODIES. (AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-717 414 6/13  
FORT DETRICK FREDERICK MD

CELL SURFACE ANTIGEN INDUCED BY VENEZUELAN  
EQUINE ENCEPHALOMYELITIS VIRUS,

(U)

AUG 70 6P HAHON, NICHOLAS I

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN INFECTION AND IMMUNITY, V2  
N6 P712-715 DEC 70.

DESCRIPTORS: (+VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, +ANTIGENS + ANTIBODIES),  
CELLS(BIOLOGY), BIOSYNTHESIS, FLUORESCENT  
ANTIBODY TECHNIQUES

(U)

BY IMMUNOFLOURESCENCE STAINING, A SPECIFIC SURFACE  
ANTIGEN INDUCED BY VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS WAS DETECTED ON L-929  
CELLS. FORMATION OF THE ANTIGEN WAS INDEPENDENT OF  
VIRAL RIBONUCLEIC ACID SYNTHESIS. (AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-719 848 6/13  
ARMY FOREIGN SCIENCE AND TECHNOLOGY CENTER CHARLOTTESVILLE  
VA

REPLICATION OF VEE VIRUS (PENLIKATIVNOI  
KOMPLEKS VIRUSA VENESUZLYSKOGO  
ZITSEFALOMIELITA LOSHADEOI),

(U)

OCT 70 9P ZHDANOV, V. M. IERSHOV, F.  
I. IURYVAEV, L. V. ;  
REPT. NO. FSTC-MT-23-964-70

UNCLASSIFIED REPORT

SUPPLEMENTARY NOTE: TRANS. OF AKADEMIYA NAUK SSSR,  
DOKLADY, V189 N6 P1282-1284 1969.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, GROWTH), EMBRYONATED EGG TECHNIQUE,  
RIBONUCLEIC ACIDS, PROTEINS, SYNTHESIS, USSR  
IDENTIFIERS: TRANSLATIONS, VIRUS SPECIFIC  
PROTEINS, REPLICATING

(U)

(U)

A REPORT IS GIVEN OF THE RESULTS OF TEST WHICH TO  
DEMONSTRATE THAT IN CELLS INFECTED WITH VENEZUELAN  
EQUINE ENCEPHALITIS VIRUS THE REPLICATIVE  
INTERMEDIARY FORM OF THIS VIRUS FUNCTIONS IN WHAT IS  
CALLED A REPLICATIVE-COMPLEX FORM, WHICH ENSURES  
SIMULTANEOUSLY BOTH REPLICATION AND THE SYNTHESIS OF  
VIRUS-SPECIFIC PROTEINS. (AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-723 297 6/13  
ARMY BIOLOGICAL DEFENSE RESEARCH CENTER FREDERICK MD

REPLICATION OF VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS IN VITRO. II.  
VIRAL GROWTH RESPONSE TO SELECTED  
NUTRITIONAL ADDITIVES IN SUSPENSION CULTURES,

(U)

OCT 70 SP HEARN, H. J. ; STRIBBLE, H.  
R. ; JR. ; INAGLE, S. C. ; JR. ; BOWERSOX, O. C.  
; JR. ;

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN APPLIED MICROBIOLOGY, V21  
N2 P242-245 FEB 71.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, GROWTH), (CULTURE MEDIA, VENEZUELAN  
EQUINE ENCEPHALOMYELITIS VIRUS), IN VITRO ANALYSIS,  
ARBOVIRUSES, VIRUSES, CHOLINES, AMINO ACIDS,  
NUTRITION

(U)

IDENTIFIERS: SERINE, PROLINES

(U)

AN ATTEMPT WAS MADE TO IDENTIFY NUTRITIONAL  
ADDITIVES THAT INFLUENCE THE REPLICATION OF  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS IN  
SUSPENSION CULTURES GROWN IN A DEFINED SERUM-FREE  
MEDIUM. PROLINE, SERINE, AND CHOLINE ENHANCED  
TITERS OF THE VIRULENT PES STRAIN; THE PROGENY  
POPULATION, HOWEVER, POSSESSED A VIRULENCE CHARACTER  
THAT WAS SOMEWHAT DIFFERENT FROM THAT OF THE PES  
INOCULA. THESE NUTRITIONAL SUPPLEMENTS DID NOT  
APPRECIABLY INFLUENCE THE TITERS OF THE ATTENUATED 9T  
AND 20T VIRAL STRAINS. WHEN BOTH THE PES AND 20T  
STRAINS WERE EMPLOYED AS A MIXED INOCULUM IN  
CULTURE, THE PRESENCE OF THE LATTER STRAIN APPEARED  
TO INTERFERE WITH THE GROWTH OF THE PES STRAIN AND  
REDUCED ITS RESPONSE TO THE MEDIUM SUPPLEMENTS.  
(AUTHOR)

(U)



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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-722 267 6/13  
FORT DETRICK FREDERICK MD

EFFECT OF SIMULATED SOLAR RADIATION AND  
SODIUM FLUORESCIN ON THE RECOVERY OF  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS  
FROM AEROSOLS,

(U)

OCT 70 SP BERENDT, RICHARD F. (DORSEY,  
EMERSON L. )

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN APPLIED MICROBIOLOGY, V21  
NO P447-450 MAR 71.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, AEROSOLS), ARBOVIRUSES, VIABILITY,  
TOXICITY, AEROBIOLOGY, SOLAR RADIATION, O-  
HETEROCYCLIC COMPOUNDS

(U)

IDENTIFIERS: \*FLUORESCIN, VIRAL AEROSOLS

(U)

ALMOST 90% OF THE TRINIDAD STRAIN OF  
VENEZUELAN EQUINE ENCEPHALOMYELITIS (VEE) VIRUS  
SURVIVED FOR 1 HR AFTER AEROSOLIZATION INTO A DARK  
ENVIRONMENT AT 30% RELATIVE HUMIDITY (RH), AND  
78% SURVIVED FOR 1 HR AT 60% RH. AFTER  
EXPOSURE TO SIMULATED SOLAR RADIATION (884 MCAL PER  
CM SQ PER MIN) 0.02% OF THE AEROSOLIZED VIRUS  
SURVIVED FOR 1 HR AT 30% RH AND 0.006% SURVIVED  
FOR 1 HR AT 60% RH. WHEN 1.0 MG OF SODIUM  
FLUORESCIN PER ML WAS ADDED TO SUSPENSIONS PRIOR TO  
AEROSOL DISSEMINATION (TO DETERMINE PHYSICAL LOSS  
OF AEROSOL), NO VIRUS WAS DETECTED AFTER 30 MIN AT  
EITHER RH UPON IRRADIATION. SODIUM FLUORESCIN  
ALSO EXHIBITED SOME TOXICITY (21% SURVIVAL AT 60  
MIN) FOR NONIRRADIATED AEROSOLS OF VEE VIRUS AT  
60% RH; NO EFFECT WAS NOTED AT 30%.

(AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMSI

AD-722 272 6/5 6/12  
FORT DETRICK FREDERICK MD

IMMUNOGENICITY OF PURIFIED VENEZUELAN EQUINE  
ENCEPHALITIS VIRUS INACTIVATED BY IONIZING  
RADIATION,

(U)

OCT 70 7P GRUBER, JACK I

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN INFECTION AND IMMUNITY, V3  
N4 P574-579 APR 71.

DESCRIPTORS: (•VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, •IMMUNOLOGY); (•VACCINES, VENEZUELAN  
EQUINE ENCEPHALOMYELITIS VIRUS), ARBOVIRUSES,  
VIRUSES, ATTENUATION, NUCLEAR RADIATION,  
PURIFICATION, ANTIGENS + ANTIBODIES, DOSAGE,  
GUINEA PIGS

(U)

PURIFIED AND CONCENTRATED VENEZUELAN EQUINE  
ENCEPHALITIS (VEE) VIRUS DERIVED FROM TISSUE  
CULTURES, RENDERED NONINFECTIOUS BY IONIZING  
RADIATION WITH RETENTION IN VITRO SEROLOGICAL  
ACTIVITY, ALSO RETAINED A HIGH LEVEL OF  
IMMUNOGENICITY. IN MICE, FLUID VACCINES AFFORDED  
EXCELLENT PROTECTION AGAINST LETHAL CHALLENGE WITH  
HOMOLOGOUS TRINIDAD STRAIN VEE VIRUS. A DIRECT  
RELATIONSHIP WAS OBSERVED BETWEEN CONCENTRATION OF  
VACCINE OR NUMBER OF INJECTIONS AND SURVIVAL. ONE  
INTRAPERITONEAL INOCULATION OF UNDILUTED VACCINE  
PROTECTED ESSENTIALLY ALL MICE CHALLENGED 21 DAYS  
LATER WITH 100,000 MOUSE INTRAPERITONEAL LD50 OF  
VIRUS. SIMILARLY, MICE RECEIVING THREE INJECTIONS  
OF VACCINES DILUTED 1:100 WERE COMPLETELY  
PROTECTED. NONINFECTIOUS VEE VIRUS PREPARATIONS  
COMBINED WITH ADJUVANT 65, A NONTOXIC METABOLIZABLE  
VEHICLE, WERE LIKEWISE VERY EFFECTIVE IN PROTECTING  
MICE IMMUNIZED INTRAPERITONEALLY OR SUBCUTANEOUSLY  
AGAINST LETHAL CHALLENGE. GUINEA PIGS IMMUNIZED  
SUBCUTANEOUSLY WITH ADJUVANT-COMBINED VACCINE  
SURVIVED LETHAL CHALLENGE OF 1,000,000 GUINEA PIGS  
INTRAPERITONEAL LD50. (AUTHOR)

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UNCLASSIFIED

DOC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMS1

AD-722 497 4/13  
FORT DETRICK FREDERICK MD

REPLICATION OF VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS IN SUSPENSION CELL  
CULTURES GROWN IN SERUM-FREE AND DEFINED  
MEDIA,

(U)

OCT 70 6P TRIBBLE, H. R. , JR. HEARN,  
H. J. INAGLE, S. C. , JR.

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN JNL. OF GENERAL  
VIROLOGY, VIO P221-224 1971.

DESCRIPTORS: (•VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, TISSUE CULTURE CELLS), (•CULTURE MEDIA,  
•TISSUE CULTURE CELLS), GROWTH, ARBOVIRUSES,  
VIRUSES, BLOOD SERUM, ALBUMINS

(U)

VARIOUS MAMMALIAN CELLS PROPAGATED IN SERUM-FREE  
AND CHEMICALLY DEFINED MEDIA YIELD HIGH TITRES OF  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS. SOME  
DIFFERENCE IN MAXIMUM TITRES WAS NOTED, DEPENDING  
UPON THE MEDIUM EMPLOYED. OF THE TWO SERUM-FREE  
MEDIA TESTED, LACTALBUMIN HYDROLYSTATE MEDIUM WAS  
MORE EFFECTIVE THAN THE CHEMICALLY DEFINED MEDIUM IN  
SUPPORTING VIRUS GROWTH. THE ADDITION OF SERUM TO  
SERUM-FREE CULTURES AT THE TIME OF VIRUS INOCULATION  
HAD A PRONOUNCED EFFECT CHARACTERIZED BY A DELAY  
FOLLOWED BY A BURST OF VIRUS REPLICATION TO VERY HIGH  
TITRES. THUS, THE DEGREE OF REPLICATION OF  
VENEZUELAN EQUINE ENCEPHALOMYELITIS VIRUS APPEARED  
TO BE INFLUENCED BY A VARIETY OF UNKNOWN NUTRITIONAL  
FACTORS. (AUTHOR)

(U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-724 874 6/13 6/5  
FORT DETRICK FREDERICK MD

IMMUNITY TO AEROSOL CHALLENGE IN GUINEA PIGS  
IMMUNIZED WITH GAMMA-IRRADIATED VENEZUELAN  
EQUINE ENCEPHALITIS VACCINES, (U)

JAN 71 6P REITMAN, MORTON ITONIK, ELLIS  
J. I

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN APPLIED MICROBIOLOGY, V21  
N4 P688-692 APR 71.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, IMMUNITY), (VACCINES, VENEZUELAN EQUINE  
ENCEPHALOMYELITIS VIRUS), GAMMA RAYS, ARBOVIRUSES,  
VIRUSES, AEROSOLS, EFFECTIVENESS, SERODIAGNOSIS,  
GUINEA PIGS (U)

IDENTIFIERS: IRRADIATED VACCINES (U)

IN A PREVIOUS REPORT, IT WAS SHOWN THAT NONVIALABLE  
VENEZUELAN EQUINE ENCEPHALITIS (VEE) VACCINES  
PREPARED BY EXPOSURE OF VIRUS SUSPENSIONS PRODUCED IN  
WI-28 CELLS TO IONIZING RADIATIONS WERE HIGHLY  
EFFECTIVE IN PROTECTING GUINEA PIGS SUBJECTED TO  
INTRAPERITONEAL (IP) CHALLENGE WITH VEE VIRUS.  
TO CHARACTERIZE FURTHER THE EFFICACY OF IRRADIATED  
VACCINES, GUINEA PIGS WERE IMMUNIZED WITH THREE LOTS  
OF VACCINE AND THEN WERE CHALLENGED VIA THE  
RESPIRATORY ROUTE WITH AEROSOLS OF VEE VIRUS.  
ANIMALS THAT RECEIVED A SERIES OF THREE IP  
INOCUATIONS OF VACCINE AT 1-WEEK INTERVALS SHOWED  
HIGH LEVELS OF RESISTANCE TO AEROSOL CHALLENGE. THE  
50% EFFECTIVE DOSE VALUES OF VACCINES RANGED FROM  
<0.0016 TO 0.0051 ML FOR RESPIRATORY CHALLENGE AND  
FROM <0.00074 TO 0.0011 ML FOR INTRAPERITONEAL  
CHALLENGE. SEROLOGICAL STUDIES SHOWED THAT  
ANTIGENICITY OF THE IRRADIATED VACCINES WAS  
EXCELLENT. MODERATE TO HIGH LEVELS OF SERUM-  
NEUTRALIZING AND HEMAGGLUTINATION-INHIBITING  
ANTIBODIES WERE DEMONSTRATED IN THE MAJORITY OF  
ANIMALS VACCINATED WITH UNDILUTED OR 0.1 DILUTIONS OF  
THE VACCINES. HOWEVER, SERUM-NEUTRALIZING AND  
HEMAGGLUTINATION-INHIBITING ANTIBODY LEVELS WERE NOT  
ALWAYS INDICATIVE OF THE LEVEL OF IMMUNITY, BECAUSE  
SOME ANIMALS IN WHICH SIGNIFICANT ANTIBODY COULD NOT  
BE DEMONSTRATED WERE ABLE TO SURVIVE CHALLENGE WITH  
VEE VIRUS. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM91

AD-726 190 6/13 6/1  
ARMY BIOLOGICAL DEFENSE RESEARCH CENTER FREDERICK MD

EFFECTS OF POLY-L-LYSINE ON INFECTIOUS  
VIRAL NUCLEIC ACID;

(U)

JAN 71 9P IDOINE, JANE B. INACHTER,  
RALPH F. ICOTLOW, RICHARD D. ;

UNCLASSIFIED REPORT

AVAILABILITY: PUB. IN JNL. OF VIROLOGY, V7 N5  
P595-602 MAY 71.

DESCRIPTORS: (VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, NUCLEIC ACIDS), (AMINO ACIDS, NUCLEIC  
ACIDS), VIRUSES, ARBOVIRUSES, INFECTIONS,  
IMMUNOLOGY, INHIBITION, MOLECULAR PROPERTIES  
IDENTIFIERS: LYSINE, MOLECULAR BIOLOGY

(U)  
(U)

INFECTIOUS RIBONUCLEIC ACIDS (IRNA) OF  
VENEZUELAN EQUINE ENCEPHALITIS AND EASTERN EQUINE  
ENCEPHALITIS VIRUSES WERE OBSERVED TO FORM  
NONINFECTIOUS COMPLEXES WITH A BASIC POLYAMINO ACID,  
POLY-L-LYSINE. ORIGINAL INFECTIVITY WAS  
RECOVERED FROM THE COMPLEXES BY DIGESTION OF THE  
POLYLYSINE WITH PRONASE, AND PARTIAL RECOVERY WAS  
EFFECTED BY TREATMENT WITH SODIUM DODECYL SULFATE.  
INFECTIVITY COULD NOT BE RECOVERED FROM THE  
COMPLEXES CONTAINING POLYLYSINE OF 100,000 MOLECULAR  
WEIGHT BY CHANGES IN IONIC STRENGTH, PH, OR BY  
TREATMENT WITH PHENOL, DEOXYCHOLATE, OR DIGITONIN.  
MASKING OF INFECTIVITY BY POLYLYSINE WAS  
DEMONSTRATED IN VIVO AS WELL AS BY PLAQUE ASSAY IN  
TISSUE CULTURE. POLY-L-LYSINE PREPARATIONS OF  
HIGH MOLECULAR WEIGHT (44,000 TO 100,000) WERE  
MORE EFFECTIVE THAN LOW MOLECULAR WEIGHT (3,000)  
MATERIALS IN MASKING INFECTIVITY OF IRNA. WHEN  
COMPLEXES, IN WHICH INFECTIVITY HAD BEEN MASKED BY  
LOW MOLECULAR WEIGHT POLYLYSINE, WERE SUSPENDED IN  
1 M NaCl, SOME INFECTIVITY WAS RECOVERED.  
COMPLEXES OF POLYLYSINE-IRNA DIFFERED FROM  
CONTROL IRNA ALONE IN (I) RESISTANCE TO  
INACTIVATION BY RIBONUCLEASE, (II) SEDIMENTATION  
PATTERNS IN SUCROSE GRADIENT CENTRIFUGATION, AND  
(III) STABILITY OF RECOVERABLE INFECTIVITY DURING  
DIFFERENT PHYSICAL TREATMENTS. (AUTHOR)

(U)

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DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-726 191 6/13 6/1  
ARMY BIOLOGICAL DEFENSE RESEARCH CENTER FREDERICK MD

PHOSPHOLIPID COMPOSITION OF VENEZUELAN EQUINE  
ENCEPHALITIS VIRUS, (U)

JAN 71 4P HEYDRICK, FRED P. ICOMER,  
JOANN F. IWACHTER, RALPH F. I

UNCLASSIFIED REPORT  
AVAILABILITY: PUB. IN JNL. OF VIROLOGY, V7 N5  
P642-645 MAY 71.

DESCRIPTORS: (•VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, •PHOSPHOLIPIDS), ARBOVIRUSES, CHEMICAL  
ANALYSIS, TISSUE CULTURE CELLS, GROWTH, THERMAL  
STABILITY (U)

IDENTIFIERS: L TISSUE CULTURE, CHICK FIBROBLASTS  
TISSUE CULTURE (U)

PHOSPHOLIPID ANALYSES OF VENEZUELAN EQUINE  
ENCEPHALITIS VIRUS SHOWED THAT VIRUS PROPAGATED IN  
L-CELL MONOLAYERS HAD A HIGHER SPHINGOMYELIN  
CONTENT AND A LOWER PHOSPHATIDYLCHOLINE CONTENT THAN  
VIRUS GROWN IN CHICK FIBROBLAST MONOLAYERS. VIRUS  
OF L-CELL ORIGIN ALSO WAS FOUND TO POSSESS GREATER  
THERMAL STABILITY THAN VIRUS DERIVED FROM THE CHICK  
FIBROBLAST CELL. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIM51

AD-804 069 6/12 6/8  
DUGWAY PROVING GROUND UTAH BIOLOGICAL DIV

EXPERIMENTAL INFECTION OF COYOTE PUPS WITH  
VENEZUELAN EQUINE ENCEPHALITIS VIRUS. (U)

DESCRIPTIVE NOTE: TECHNICAL REPT.,  
NOV 66 14P LUNDGREN, DAVID L. TERRY,  
DAVID R. ISHART, KEITH L. I  
PROJ: DA-1LO12001A91A, USATECOM-5-4-9001-00  
MONITOR: DPG T67-106

UNCLASSIFIED REPORT

DESCRIPTORS: (•VENEZUELAN EQUINE ENCEPHALOMYELITIS  
VIRUS, EPIDEMIOLOGY), (•DOGS, DISEASE VECTORS),  
VIRUS DISEASES, RESISTANCE(BIOLOGICAL),  
INFECTIOUS DISEASES, IMMUNITY, SERODIAGNOSIS,  
ANTIGENS + ANTIBODIES, MICE (U)  
IDENTIFIERS: COYOTES (U)

AN INVESTIGATION WAS UNDERTAKEN TO DETERMINE THE  
DISPOSITION OF COYOTES TO INFECTION BY THE VIRUS OF  
VENEZUELAN EQUINE ENCEPHALOMYELITIS, AND ALSO TO  
DETERMINE ONSET, HEIGHT AND DURATION OF  
HAEMAGGLUTINATION INHIBITING, COMPLEMENT-FIXING AND  
VIRUS-NEUTRALIZING ANTIBODY. IN THIS INITIAL  
REPORT, IT IS SHOWN THAT YOUNG COYOTES WERE HIGHLY  
SUSCEPTIBLE TO THE EPIDEMIC STRAIN OF VEE VIRUS  
USED, AND THAT THEY DEVELOPED A DOSE-INDEPENDENT  
VIREMIA LASTING FOR AN AVERAGE OF 3.6 DAYS IN 1 TO 2  
MONTHS-OLD PUPS, AND 2.8 DAYS IN 6 TO 7 MONTHS-OLD  
PUPS. LESS THAN ONE HOUSE INTRA CEREBRAL MEDIAL  
DOSE (MICLD50) MAY INITIATE INFECTION WITHIN 24  
HOURS. INFECTION WITH STRAIN OF VEE VIRUS LED TO  
A CHARACTERISTIC SYMPTOMATOLOGY, BUT WAS  
CHARACTERIZED BY A LOW INCIDENCE OF LETHALITY EVEN IN  
VERY YOUNG ANIMALS. THESE RESULTS INDICATE THAT  
THE COYOTE MAY SERVE AS A SHORT TERM SOURCE OF VEE  
VIRUS IN THE NATURAL INFECTION CHAIN. ALTHOUGH THE  
COYOTE DOES OCCUR OVER A WIDE GEOGRAPHIC RANGE  
INCLUDING ENDEMIC AREAS, ITS ROLE AS A LINK IN THE  
DISSEMINATION CHAIN LEADING TO HUMAN COMMUNITIES MAY  
NEVERTHELESS BE MINIMAL BECAUSE OF ITS LOW POPULATION  
DENSITY. (AUTHOR) (U)

UNCLASSIFIED

DDC REPORT BIBLIOGRAPHY SEARCH CONTROL NO. /ZIMB1

AD-825 755 6/12  
LIBRARY OF CONGRESS WASHINGTON D C AEROSPACE TECHNOLOGY  
DIV

SOVIET VIROLOGY.

(U)

DESCRIPTIVE NOTE: SURVEYS OF FOREIGN SCIENTIFIC AND  
TECHNICAL LITERATURE,

JUN 68 103P PERKINS, LEE IHRUBIAK, WASYL ;  
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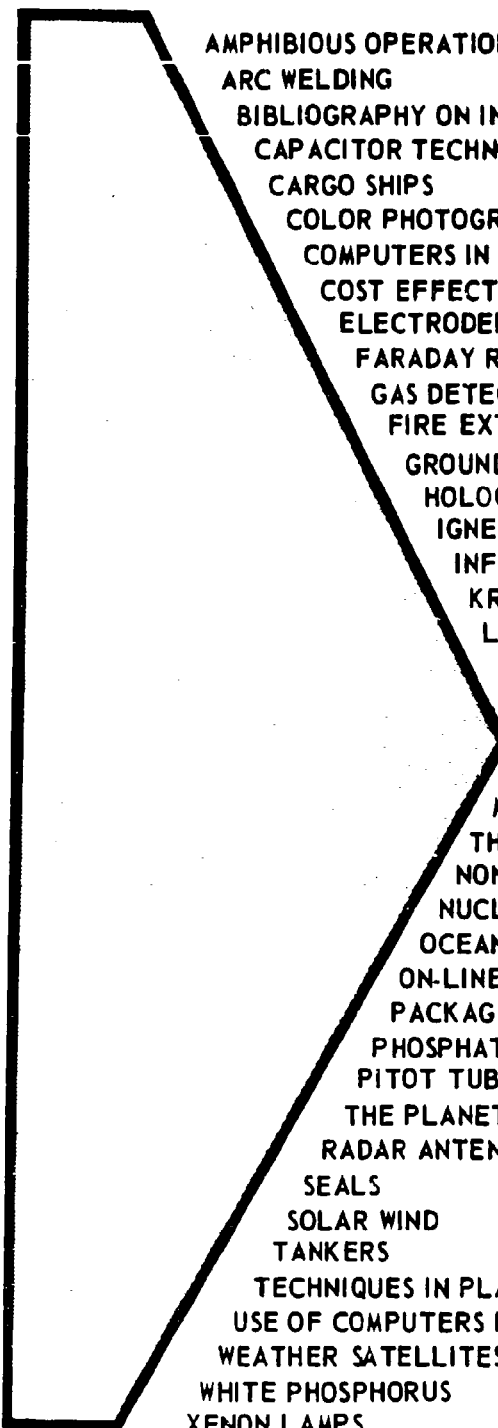
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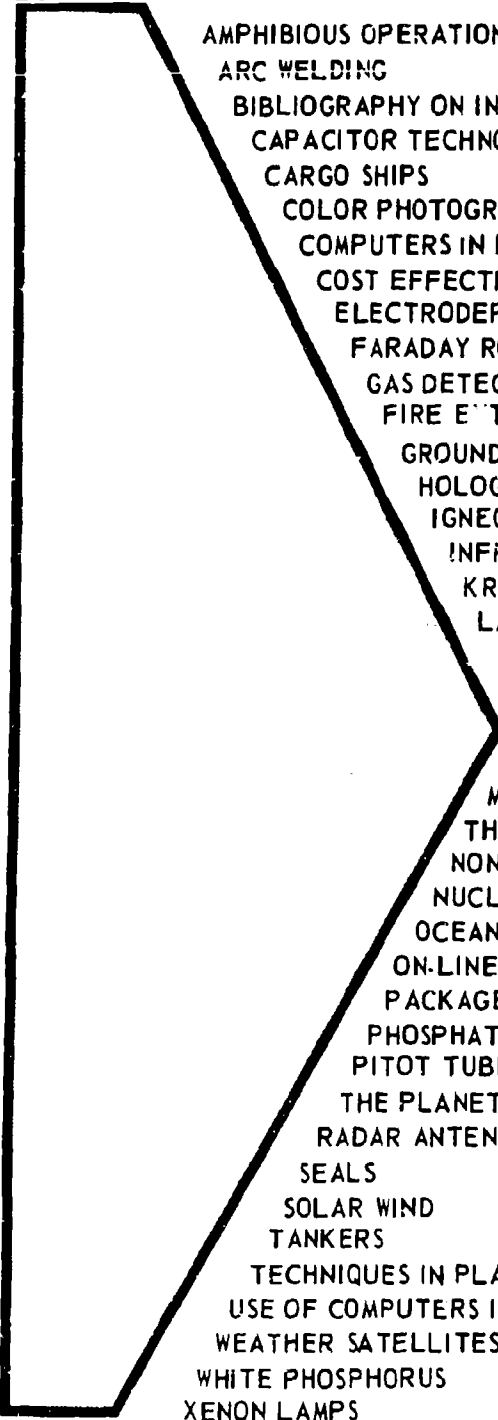
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